**STOPPING
WATER POLLUTION
AT ITS SOURCE**

MISA
Municipal/Industrial Strategy for Abatement

THE DEVELOPMENT DOCUMENT FOR THE DRAFT EFFLUENT MONITORING REGULATION FOR THE ELECTRIC POWER GENERATION SECTOR

Environment
Ontario

Jim Bradley
Minister

ISBN 0-7729-5813-0

MUNICIPAL - INDUSTRIAL STRATEGY FOR ABATEMENT
(MISA)

THE DEVELOPMENT DOCUMENT
FOR THE
DRAFT EFFLUENT MONITORING REGULATION
FOR THE
ELECTRIC POWER GENERATION SECTOR

August, 1989

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89-05360/

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USE OF THE MISA SECTOR SPECIFIC EFFLUENT MONITORING REGULATIONS WITH THE GENERAL EFFLUENT MONITORING REGULATION

Under the MISA program, the monitoring requirements for each sector are specified in two regulations - The General Effluent Monitoring Regulation (Ontario Regulation 695/88) and the relevant sector-specific Regulation.

The General Effluent Monitoring Regulation provides the technical principles which are common to all sectors. It covers the "how to" items such as sampling, chemical analysis, toxicity testing, flow measurement and reporting.

The sector-specific Regulation specifies the monitoring requirements of each direct discharger, such as the actual parameters to be monitored, the frequency of monitoring and the regulation in-force dates.

The General Effluent Monitoring Regulation, which must be used in conjunction with the sector-specific Regulation, is published under separate cover.

FOREWORD

The Municipal-Industrial Strategy for Abatement (MISA) program is aimed at reducing discharges of toxic contaminants to Ontario's waterways. The ultimate goal of the MISA program is the virtual elimination of persistent toxic contaminants from all discharges to Ontario's receiving waters.

The purpose of this document is to provide background information on the development of the MISA Draft Effluent Monitoring Regulation for the Electric Power Generation Sector.

The EPG Development Document contains:

A. An overview of the Electric Power Generation Sector.

B. The Technical Rationale document for the Electric Power Generation Sector which describes the derivation of the monitoring parameters and the monitoring frequencies specified in the Effluent Monitoring Regulation.

C. The draft Effluent Monitoring Regulation for the Electric Power Generation Sector.

D. Explanatory Notes which explain the legal terms used in the Regulation.

E. The MISA Advisory Committee's (MAC) report to the Minister of the Environment on the Draft Effluent Monitoring Regulation for the Electric Power Generation Sector.

F. The Ministry of the Environment's response to the MISA Advisory Committee report.

PART A

OVERVIEW OF THE ELECTRIC POWER GENERATION SECTOR

I INTRODUCTION

The first part of this section serves as an introduction to the Electric Power Generation Sector. It defines electric power generation, provides a historical overview of the industry, and describes general methods of power generation as well as wastewater generation and treatment.

The section concludes with specific information on each of the stations and facilities comprising the MISA Electric Power Generation (EPG) Sector. The EPG Sector in Ontario is primarily operated by Ontario Hydro. No private sector operators are included.

II DEFINITION OF ELECTRIC POWER GENERATION SECTOR

Electric power generation refers to the generation of electricity.

The electric power generation industry, for the purposes of the development of the Effluent Monitoring Regulation, has been classified into three general categories based on power generation technology:

- hydraulic generation (waterfall);
- fossil-fuelled thermal generation (coal, oil, natural gas); and,
- nuclear-powered thermal generation (uranium).

A fourth category has been established which includes facilities associated with nuclear power generation:

- associated facilities

  (including: heavy-water plants, nuclear complex services, sites under construction, partially decommissioned (non-operating) stations, and facilities with research reactors which include research and development laboratories that support the development of nuclear power and support nuclear generating stations, specifically Chalk River Nuclear Laboratories).

III HISTORICAL OVERVIEW OF ELECTRIC POWER GENERATION

It is only in the past hundred years that rapid progress has been made in the generation and application of electricity on a large scale.

Initially, modern-day electrical power was generated by harnessing the energy produced by falling water to rotate turbines, which in turn drove electrical generators. These are called hydraulic (or hydroelectric) generating stations (HGS). Hence the term "hydroelectric power", derived from the Latin word for water - hydro, which is nowadays shortened to "hydro power" or "hydro" and is used to refer to electricity in general.

The first power plant of this type in Ontario was commissioned in 1893 on the Niagara River, by the company which is now Ontario Hydro. Today, Ontario Hydro operates are a total of 68 hydraulic generating stations in the province. These stations are located on 26 watersheds, with approximately one-third of the sites in remote northern areas. Fifty-seven of the stations are unmanned, thus requiring remote operation and monitoring, and are visited on a regular basis by operations or maintenance staff.

As readily-available hydraulic sites were developed, and with ever-increasing demands for electricity, emphasis shifted towards building thermal generating stations (TGS). Thermal generating stations produce high-pressure steam that is used to rotate turbines and drive the generators which generate electricity.

The first thermal stations were designed to burn fossil fuels such as coal, oil, or natural gas (fossil-fuelled (or fossil-fired) thermal generating stations). The first thermal generating station to be built in Ontario was the R. L. Hearn TGS, located in Toronto, which began service in 1951. A total of eight fossil-fired stations have been built in the province, two of which are now mothballed (i.e. the plant is shut down, but equipment is maintained and stored operational).

As the demand for electricity increased further, nuclear-fission technologies were used to develop nuclear-powered thermal generating stations (NGS) which use uranium oxide as a fuel. The first prototype commercial nuclear-powered generating unit in Canada, a CANDU (Canadian-Deuterium Uranium) reactor, began operation in 1962 at the Nuclear Power Demonstration facility on the Ottawa River at Rolphton. The first commercial nuclear generating station to operate in Ontario was Douglas Point NGS on Lake Huron, in 1968. Both of these sites are now partially decommissioned. Four additional nuclear generating stations, at two nuclear-power complexes, have been built and are operating today. Another NGS is currently under construction. All commercial nuclear-powered generating units in Ontario are of the CANDU design.

Today, all three types of generating stations are used to supply electricity. Hydraulic and nuclear stations are used to maintain a base level of electrical output (base-load stations), while fossil-fuelled thermal stations are operated during periods of peak demand since their units can be started up or shut down in a few hours as demand changes (peaking stations).

IV PRINCIPAL RAW MATERIALS

Because hydraulic generating stations use only the force of falling water to generate electricity, they have no "raw materials" as such.

The principal raw materials used for the generation of electricity are the fuels and demineralized water utilized by thermal generating stations to produce high-pressure steam. The fuels used may be either fossil or nuclear types. Large quantities of surface water (lake or river) are treated to produce and maintain high-purity boiler water which is used to generate steam. Even greater quantities of surface water, used as once-through cooling water, are required to condense the steam back into feed water for the steam-production cycle.

Generating stations are planned to produce electricity economically, based on predicted future demand. The long-term availability of fuel supply and its cost are a major consideration. The different types of fuels have unique characteristics which dictate the quantity required to produce a given quantity of heat, and thus, the amount of steam and electricity generated. These fuel characteristics also determine, to a certain extent, the quantities and characteristics of waste by-products formed.

The six operating fossil-fuelled thermal generating stations use various grades of coal and fuel oil. One mothballed generating station was converted from coal to natural-gas combustion in its later years. The major differences between these stations, aside from design considerations, are the cost of the fuel used and the quantity of waste by-products formed. In terms of pollutants (by-products) formed, combustion of coal typically produces large quantities of ash and acidic waste gas emissions which are primarily sulphur oxides. Fuel oil produces little ash and has low sulphur oxide emissions. Natural gas is the cleanest of the fossil-fuels, which produces no ash and has minimal sulphur oxide emissions. All fossil-fuelled stations produce acid waste gas emissions which are oxides of nitrogen, as a by-product of combustion.

There are four operational nuclear-powered thermal generating stations at two nuclear complexes in Ontario. These stations use 16 CANDU type reactors for power generation. Another four units are under construction at a third site, Darlington Nuclear Generating Station. All units use natural uranium dioxide in pellet form as a fuel. The pellets are enclosed in fuel bundles where fission of uranium-235 generates heat. Heavy water is used as the reactor moderator and also as the heat-transfer medium used to produce steam from high-purity, demineralized boiler water. Nuclear-powered thermal generating stations produce by-product waste (radioactive) that is smaller in volume than wastes produced at coal-fired, fossil-fuelled stations.

The major facility associated with nuclear power generation is a heavy-water production plant. This plant extracts and enriches naturally-occuring heavy water from lake water using recycled hydrogen sulphide gas. The heavy water is then vacuum distilled to high purity.

V ELECTRIC POWER GENERATION PROCESS

The principle of generating electricity is that an electric current is produced in a copper wire if the wire is moved quickly through the field between two magnets. In large electric generators, called "turbo-generators", many loops of wire are mounted around the circumference of the machine. Thus, the magnetic lines of force produced by electromagnets mounted on the rotor shaft "cut" many more wires as they spin around, and more electricity is produced. This is the basic technique by which electric power is generated at hydraulic, fossil-fuelled and nuclear-powered generating stations in Ontario. The main difference in the three categories lies in the technology employed to rotate the generator shaft.

Method 1: Water turbines are used at hydraulic stations to convert the driving force of falling water on paddle wheels (turbine blades) into the rotation of generator shafts. Once the energy produced by falling water has served its purpose, the water is returned to the river downstream (Fig. A.1). The turbines may be mounted in either a horizontal or vertical position with the generator oriented on the same axis, depending on the design of the station.

Method 2: Steam is used at thermal generating stations to drive steam turbines which power turbo-generators. The high-pressure steam can be produced using two different methods:

a) fossil-fuelled stations use the combustion of coal, oil or natural gas in boilers (Fig. A.2);

b) nuclear-powered stations use the energy released by the fission (splitting) of uranium-235 atoms to heat heavy water, which in turn is used to boil high-purity demineralized water (Fig. A.3).

Once the high-pressure steam has expended its energy on the turbine blades, the steam is reheated and is fed to a second turbine stage at lower pressure to make more efficient use of it. Large heat exchangers utilizing lake or river water are used to assist in cooling and condensing the steam back to liquid water (condensate) for efficient boiler operation. This water is recycled back to the boiler where it again continues through the closed steam cycle. Additional make-up demineralized water is added continuously to compensate for leaks and boiler blowdown.

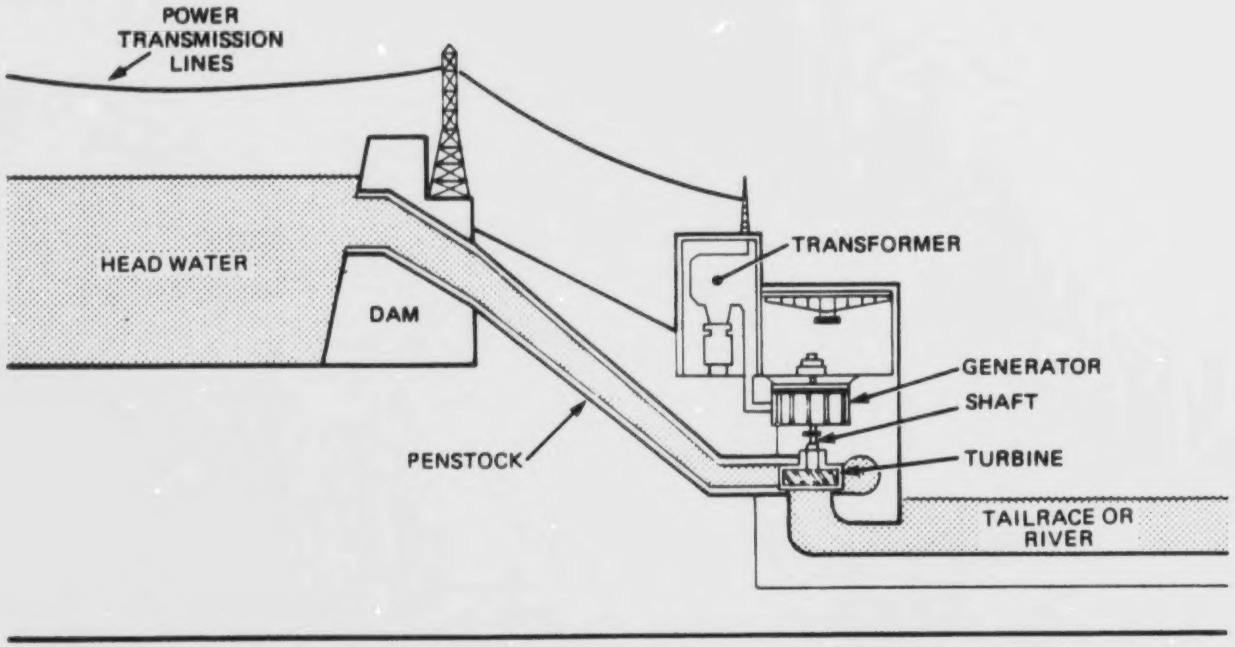
POWER
TRANSMISSION
LINES
HEAD WATER
DAM
PENSTOCK
TRANSFORMER
GENERATOR
SHAFT
TURBINE
TAILRACE OR
RIVER

Figure A.1 Cross-sectional View of a Typical Hydraulic Generating Station

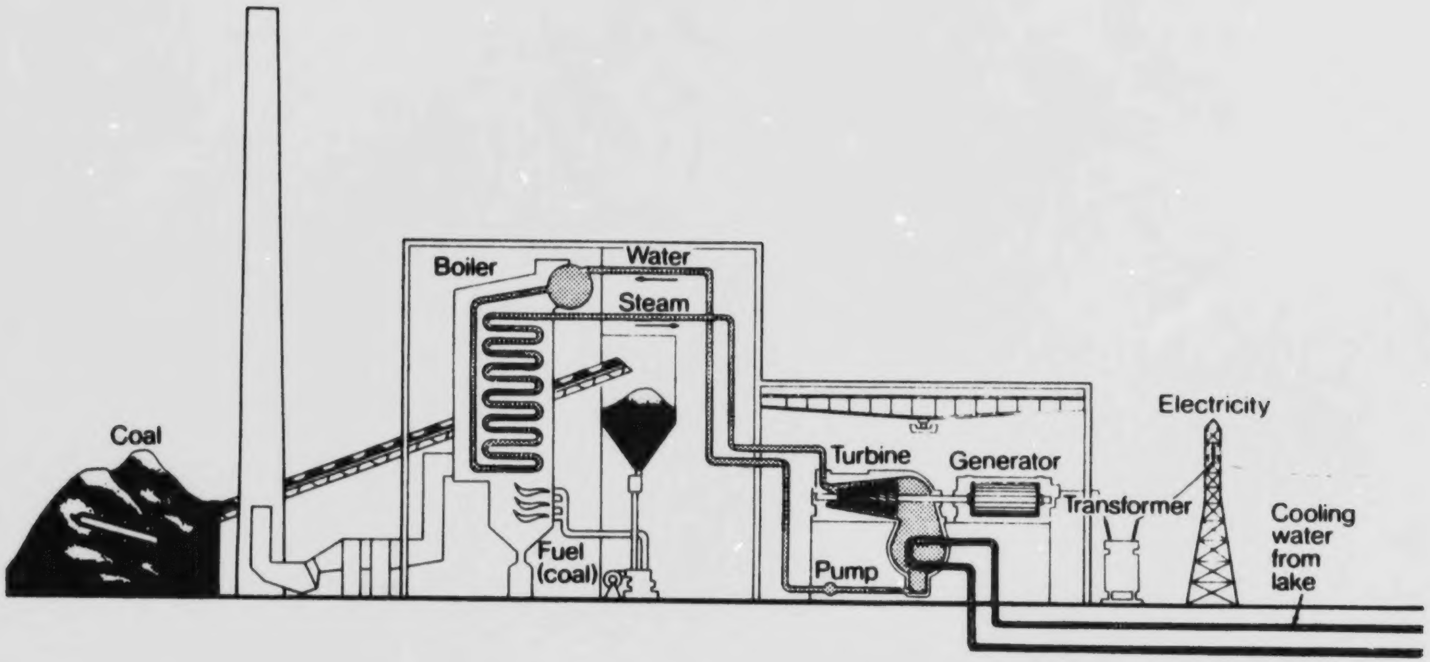
Coal
Boiler
Water
Steam
Fuel (coal)
Turbine
Generator
Pump
Transformer
Electricity
Cooling water from lake

Figure A.2 Cross-sectional View of a Typical Fossil-fuelled Thermal Generating Station

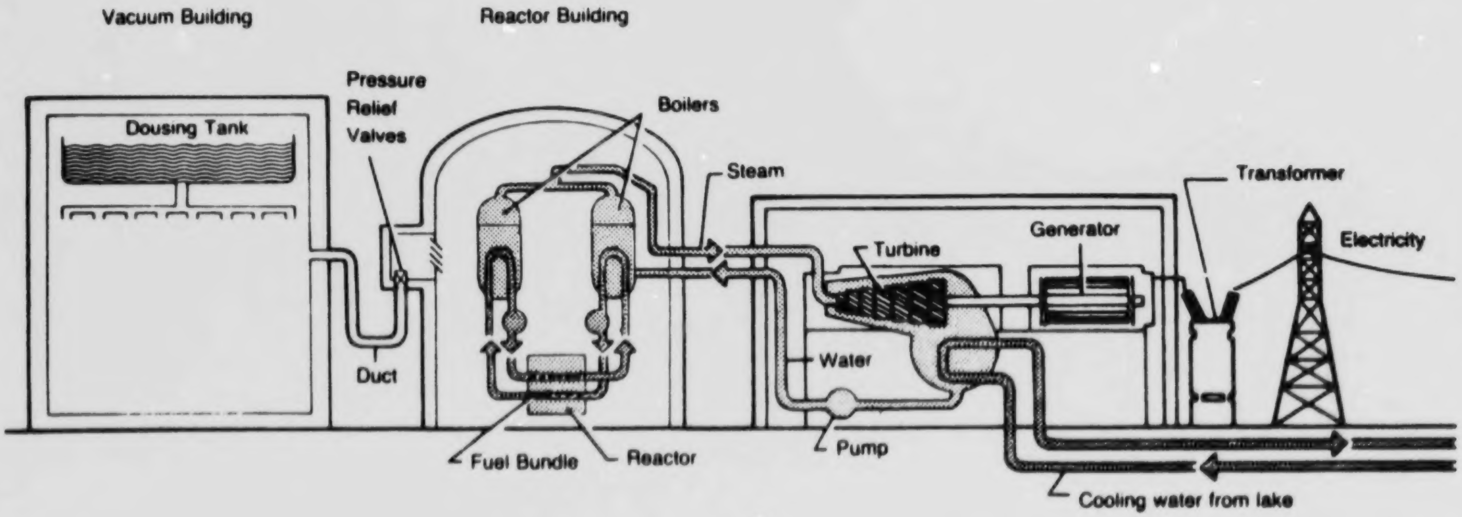
Vacuum Building
Reactor Building
Pressure Relief Valves
Dousing Tank
Boilers
Steam
Transformer
Generator
Turbine
Electricity
Water
Duct
Fuel Bundle
Reactor
Pump
Cooling water from lake

Figure A.3 Cross-sectional View of a CANDU Nuclear-powered Thermal Generating Station

HEAVY WATER PRODUCTION

Heavy water is a naturally occurring form of water where Deuterium, which is an isotope of hydrogen containing a neutron in the nucleus, replaces hydrogen in the molecule. Ordinary lake water contains one part heavy water, or deuterium oxide (D_2O), per seven thousand parts of ordinary water.

Heavy water is used in nuclear-powered thermal generating stations to control, or "moderate", the fission of uranium-235 atoms which produces heat. Heavy water is also used as a heat-transfer medium to produce high-pressure steam in boilers.

Heavy water is extracted by vigorously mixing water with hydrogen sulphide gas, such that naturally occurring deuterium exchanges freely between the gas and liquid. Utilizing counter-current isotopic exchange between hot and cold sections of a separation tower (H_2S - H_2O Dual Temperature Process), as shown in Figure A.4, the D_2O concentration is increased from 0.015% to 30% by passing the feed water through a series of towers (stages of an enriching unit). This heavy water is then sent to a vacuum distillation unit for upgrading to 99.90% purity.

On average, a total of 340,000 tonnes of lake water is used for each tonne of heavy water produced. Approximately 34,000 tonnes of the lake water is used for the actual extraction process, with the remainder being utilized for cooling purposes.

The production capacity for heavy water in Ontario amounts to approximately 800 tonnes per year. To initially fill a nuclear reactor unit, 800 tonnes of heavy water is required. Annual make-up is about 1% of capacity (8t) per unit, for a current yearly total of about 128 tonnes for all units in Ontario.

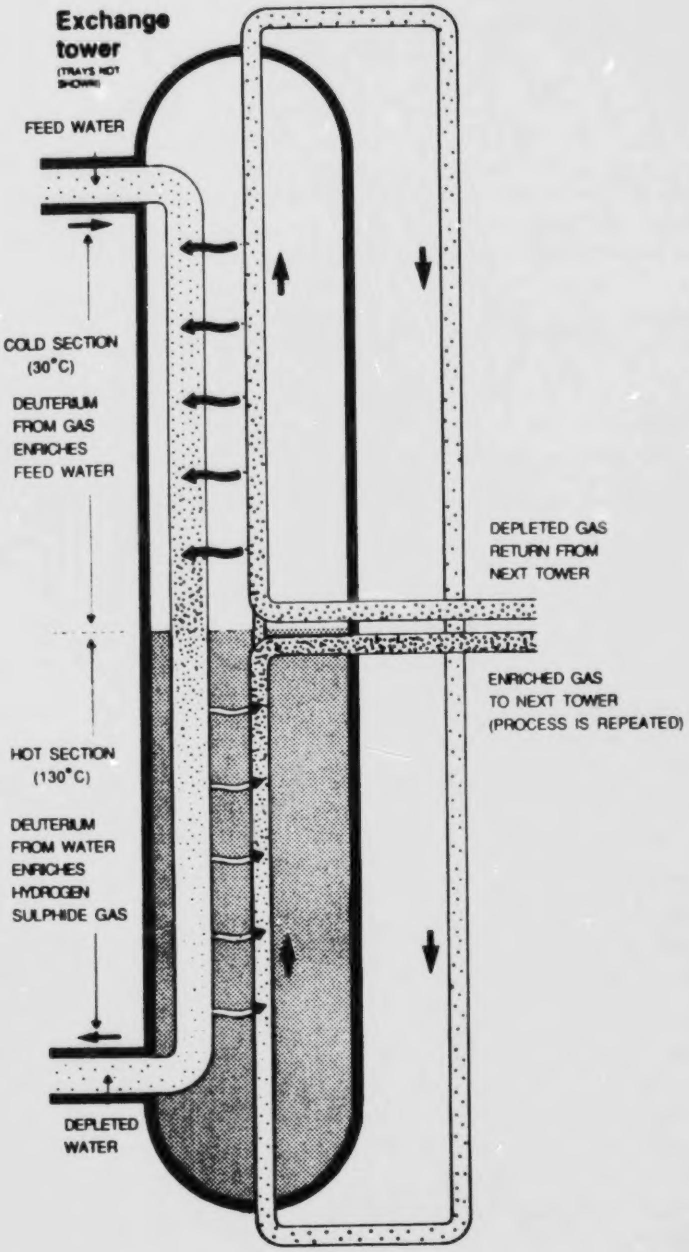
Exchange tower
(TRAYS NOT SHOWN)
FEED WATER
COLD SECTION (30°C)
DEUTERIUM FROM GAS ENRICHES FEED WATER
DEPLETED GAS RETURN FROM NEXT TOWER
ENRICHED GAS TO NEXT TOWER (PROCESS IS REPEATED)
HOT SECTION (130°C)
DEUTERIUM FROM WATER ENRICHES HYDROGEN SULPHIDE GAS
DEPLETED WATER

Figure A.4 Heavy-water Upgrading Process

VI WASTEWATER

The various processes employed in electric power generation and associated facilities result in process wastewaters of varying composition. A variety of pollutants, including both conventional and persistent toxic contaminants, may be found in the wastewaters. Characterization of wastewaters from thermal generating stations, performed by the United States Environmental Protection Agency (1) and Environment Canada (2,3), have identified many contaminants present.

Conventional pollutants which may be present include acids, bases, suspended solids, dissolved solids, oil and grease, organic carbon and nitrogen. Conventional pollutants may originate from raw materials, products and by-products. Toxic pollutants may include metals, phenols, and chlorinated hydrocarbons. The pollutants may originate from raw materials, products, by-products, and from other chemicals used on-site.

The characteristics of untreated process wastewaters generated within the various categories of generating stations tend to be similar in composition.

At hydraulic generating stations, few pollutants are expected due to the nature of the operation. Oils and grease originating from machinery and transformers are the most likely contaminants to be discharged. No treatment systems are located at these stations. Approximately 57% of the stations in service collect building drainage in sumps at the lowest point in the building, which are pumped out to the tailrace when they reach a high level. The remaining stations do not have sumps due to their design, and effluents drain directly back into the watercourse via drain systems.

Fossil-fuelled thermal generating stations may discharge pollutants from a variety of effluent streams (Fig. A.5). The streams of major concern are: coal pile effluents, wet ash handling systems, boiler blowdown, and water treatment plant wastes. Coal pile effluents are acidic, and have suspended solids, dissolved metals, and organic compounds. Ash handling effluents are normally basic, have suspended and dissolved solids, and contain metals. Boiler blowdown has altered pH, dissolved and suspended solids containing metals, and unconsumed boiler treatment chemicals which are used to scavenge oxygen. Water treatment plant wastes may be either acidic or basic, and have dissolved and suspended solids as a result of the removal of water hardness. Drain systems may contain suspended solids, oil and grease, and spilled chemicals.

Nuclear-powered thermal generating stations discharge effluents (Fig. A.6) which include water treatment plant wastes and boiler blowdown streams similar to those found at fossil-fuelled stations. Radioactive effluents are collected and held in tanks, and may be discharged at controlled rates without further treatment. If radiation levels are high, the effluents may be retained in tanks or are treated before being discharged.

Untreated process wastewaters generated at the various facilities associated with nuclear power generation tend to be different in composition, depending on the site.

Heavy water plants routinely discharge seal oils, hydrogen sulphide (containing mercaptans), diethanolamine (used to recover H_2S), and antifoaming agents.

Chalk River Nuclear Laboratories discharge a variety of streams similar to those found at nuclear generating stations, however, at much smaller volumes. The effluents include cooling water used for the nuclear reactors, boiler blowdown, water treatment plant effluents, radioactive effluents, waste disposal site effluents, and effluent from the sanitary sewage treatment plant.

At the partially-decommissioned Waste Management Facilities, the effluents discharged are primarily stormwater and building drainage. Potentially radioactive effluents are collected and if required, are transported offsite for treatment.

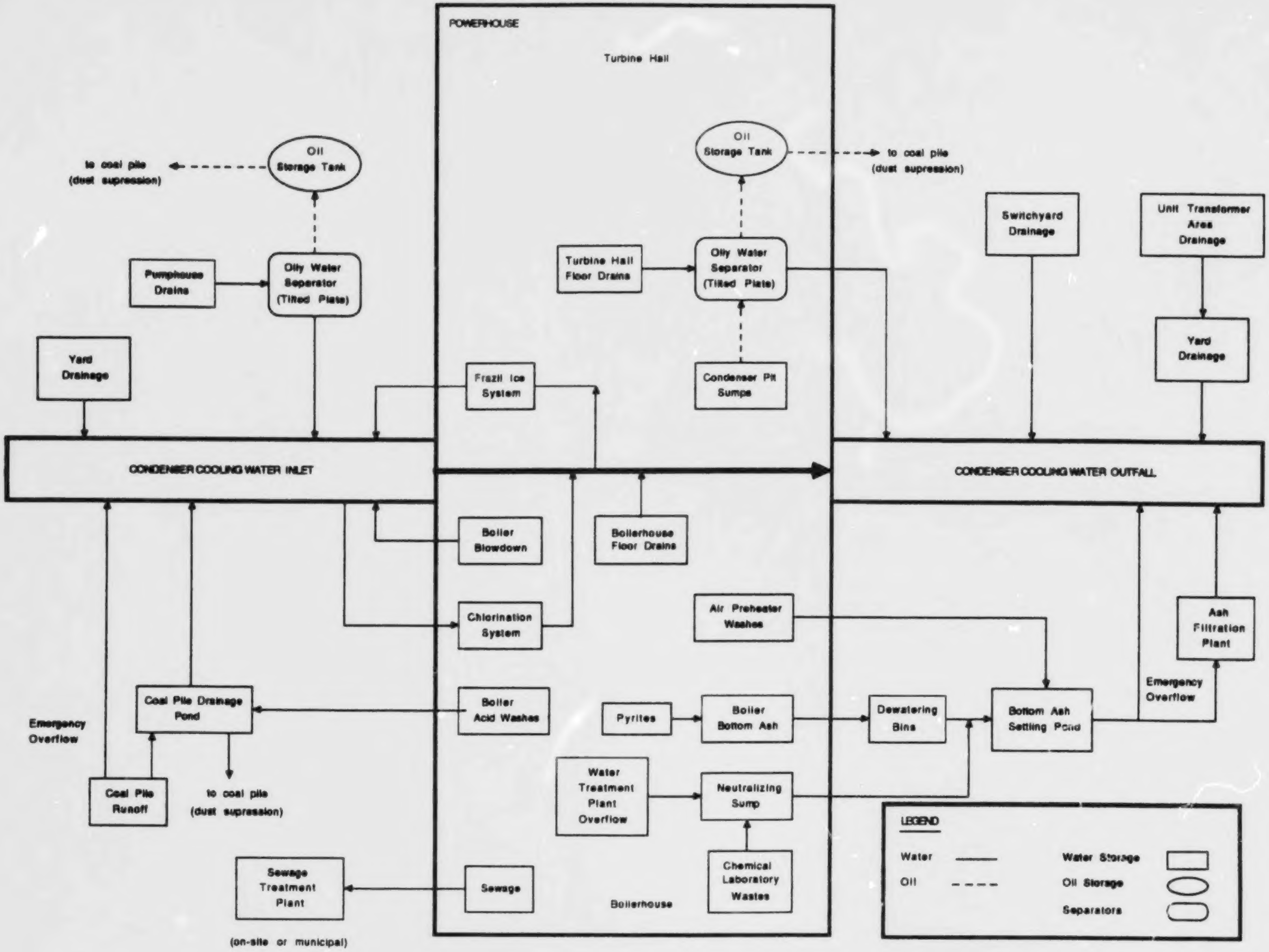
POWERHOUSE
Turbine Hall
Oil Storage Tank
to coal pile (dust supression)
Oily Water Separator (Tilted Plate)
Pumphouse Drains
Yard Drainage
Frazil Ice System
Turbine Hall Floor Drains
Oily Water Separator (Tilted Plate)
Oil Storage Tank
to coal pile (dust supression)
Condenser Pit Sumps
Switchyard Drainage
Unit Transformer Area Drainage
Yard Drainage
CONDENSER COOLING WATER INLET
CONDENSER COOLING WATER OUTFALL
Boiler Blowdown
Boilerhouse Floor Drains
Chlorination System
Air Preheater Washes
Ash Filtration Plant
Emergency Overflow
Coal Pile Drainage Pond
Boiler Acid Washes
Pyrites
Boiler Bottom Ash
Dewatering Bins
Bottom Ash Settling Pond
Emergency Overflow
Coal Pile Runoff
to coal pile (dust supression)
Water Treatment Plant Overflow
Neutralizing Sump
Chemical Laboratory Wastes
Sewage Treatment Plant
(on-site or municipal)
Sewage
Boilerhouse
LEGEND
Water ———
Oil - - - -
Water Storage ▭
Oil Storage ⬭
Separators ▢

Figure A.5

Effluent Pathways for a Typical Fossil-fuelled Thermal Generating Station

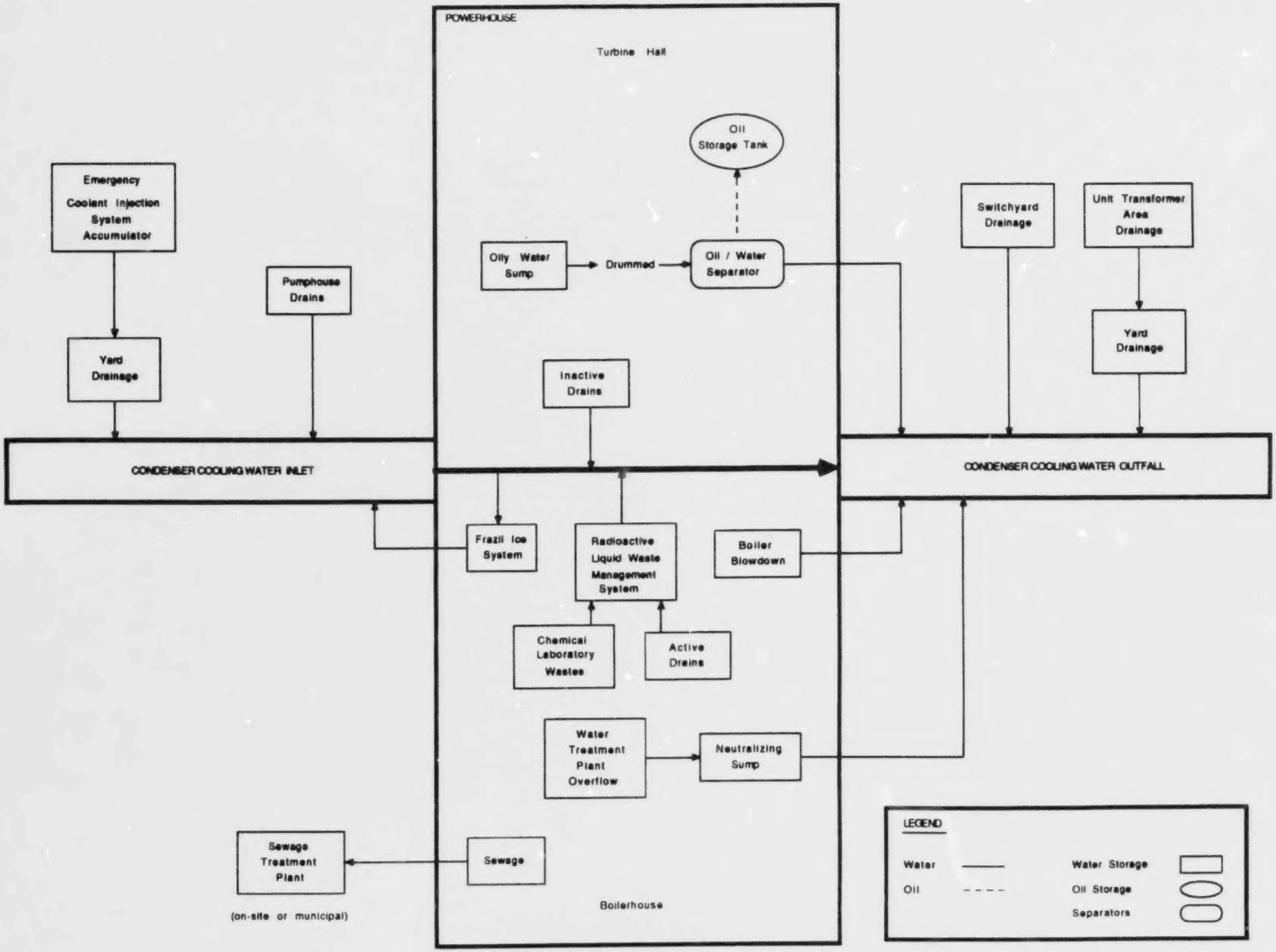
POWERHOUSE
Turbine Hall
Oil Storage Tank
Emergency Coolant Injection System Accumulator
Pumphouse Drains
Yard Drainage
Olly Water Sump
Drummed
Oil / Water Separator
Switchyard Drainage
Unit Transformer Area Drainage
Yard Drainage
Inactive Drains
CONDENSER COOLING WATER INLET
CONDENSER COOLING WATER OUTFALL
Frazil Ice System
Radioactive Liquid Waste Management System
Boiler Blowdown
Chemical Laboratory Wastes
Active Drains
Water Treatment Plant Overflow
Neutralizing Sump
Sewage Treatment Plant
(on-site or municipal)
Sewage
Boilerhouse
LEGEND
Water
Oil
Water Storage
Oil Storage
Separators

Figure A.6 Effluent Pathways for a Typical Nuclear-powered Thermal Generating Station

VII IN-PLANT CONTROLS

In-plant controls are methods of limiting the discharge of pollutants by performing process modifications, chemical substitutions, and water reduction and recycling.

Process modifications generally include measures to improve the efficiency of unit operations, thereby reducing the quantities of pollutants that may be discharged in the wastewaters.

An example of chemical substitution occurring at all older stations concerns transformers containing oils contaminated with polychlorinated biphenyls (PCB's). Depending on the level of contamination, the PCB's may be destroyed on site or the oil may be removed and incinerated. Replacement oils and new equipment contain no PCB's. Another example is currently occurring at nuclear-powered generating stations, where electrohydraulic control fluids which are used in high-pressure turbine governor systems (Fyrquel-EHC) are being replaced with a less toxic compound (Fyrquel-EHC-S).

The recovery of by-products through physical treatment processes or recycling, and through the control of spills from process or storage areas, will also reduce losses to the environment.

At fossil-fuelled thermal generating stations, boiler bottom ash is recovered from sluicing (ash transport system) water. Coal-pile effluent may be collected and re-used for dust suppression on the coal pile. Water reduction methods are practiced by using dry systems to recover flyash at all but one station. This last station has a wet system originally designed to recycle water, which will likely be converted to a dry flyash system in the future.

Generally, both process and storage areas at stations are designed to prevent spills from entering storm drain systems. Where there is great potential for contamination, treatment is provided downstream (e.g. oily water separation on drain systems).

Recycling of water and reducing water consumption, where practical, will also reduce contaminant losses.

VIII WASTEWATER TREATMENT

Both physical-chemical and biological processes may be used to control the pollutants discharged in wastewaters.

The majority of the EPG Sector stations and associated facilities use physical-chemical treatment methods on their process effluents. Some sites have sanitary waste treatment systems which may receive industrial wastes. Also, some effluent streams are discharged from sites directly to receiving waters without any form of treatment. The generating stations generally discharge effluents into once-through cooling water streams where the contaminants become significantly diluted.

Among the physical-chemical treatment technologies employed are: neutralization, oily water separation, coagulation, flocculation, sedimentation/clarification, filtration, adsorption/desorption, and steam stripping. Some examples of treatment methods used at various EPG facilities are provided below.

At thermal generating stations, water treatment plant regeneration wastes are usually neutralized in a sump before being discharged. Also, some drain systems which have the potential to be contaminated with oil have oily water separation equipment installed.

At fossil-fuelled stations, coal-pile effluent is neutralized, and in some cases is filtered, before discharge. Bottom ash sluice water is clarified and filtered prior to discharge.

At the heavy-water plant, steam stripping is used to recover hydrogen sulphide from the enriching tower effluent.

Biological treatment systems are used primarily for sanitary sewage, however, industrial wastes may also be directed to these systems for treatment. Biological treatment involves contacting the wastewater with microorganisms which metabolize the wastes for energy production and synthesis of new cells. Biological treatment technologies include activated sludge systems, rotating contactors, and lagoons.

The site under construction currently uses rotating biological contactors, designed to treat sanitary sewage from the station, for treating both sanitary and industrial wastes. The industrial wastes consist of pipe-cleaning rinse tank effluents. When construction is complete, only sanitary sewage from the generating station will be directed to this treatment system.

At Chalk River Nuclear Laboratories, sanitary wastes are only clarified and chlorinated before discharge.

IX THE ELECTRIC POWER GENERATION SECTOR IN ONTARIO

The electric power generation industry in Canada is very large, consisting of over two hundred generating stations. Of the 89 stations and associated facilities located in Ontario which are direct dischargers, 27 will be monitored under the MISA program. Only six of the 68 major hydraulic generating stations are presently being included to represent the subsector, since hydraulic stations are not considered to be a major source of toxic contaminants released to waterways.

Of the 27 EPG Sector sites that are to be monitored, 22 are located in southern and central Ontario near large population centers, and the remaining five are located in northern Ontario.

The Electric Power Generation Sector facilities in Ontario are operated or owned by two companies, Ontario Hydro and Atomic Energy of Canada Limited (AECL).

Ontario Hydro is a provincial crown corporation, which in 1987 supplied approximately 95% of the electricity consumed in Ontario. It had a total generation capacity of 32,123 megawatts (MW) compared to a national total of 100,638 MW in 1987 (4). In the EPG Sector, Ontario Hydro produces electricity at 68 hydraulic stations, six fossil-fuelled stations, and four nuclear-powered stations at two nuclear-power complexes. In 1987, of the electricity generated in Ontario, hydraulic generating stations accounted for 23.8%, fossil-fuelled stations 23.9%, and nuclear-powered stations 47.5% of Ontario's power requirements. Due to unusually warm and dry weather conditions, fossil-fuelled stations burned about 50% more coal than expected to offset a reduction in hydraulic generating capability. The remaining 4.8% of Ontario's power requirements were met by purchasing electricity from other utilities.

Ontario Hydro also operates a heavy water plant and a services site at one of the nuclear complexes, and has one nuclear site under construction (first unit expected to begin service in 1990). In addition, Ontario Hydro has two fossil-fuelled stations which are mothballed.

Atomic Energy of Canada Limited is a Federal Crown Corporation established in 1952 to "pursue researches and investigations with respect to atomic energy" and to "utilize, cause to be utilized and prepare for the utilization of atomic energy" for the continuing benefit of Canada and Canadians.

AECL currently consists of two operating divisions: Research Company and CANDU Operations. Two other divisions; Radiochemical Company and Medical Division, were transferred to the Canadian Development Investment Corporation in 1988 in preparation for privatization.

The Research Company operates major research laboratories at Chalk River, Ontario. Chalk River Nuclear Laboratories (CRNL) include research reactors and carry out research in advanced reactor development, radiation applications and isotopes, and physics and health sciences.

CANDU Operations is responsible for the design and marketing of the CANDU nuclear power plant and providing Engineering Services. This division manages the partially-decommissioned nuclear sites at Douglas Point and the Nuclear Power Demonstration site at Rolphton, Ontario.

Captive generating plants, parallel (private) generators which are mostly hydraulic, and energy-from-waste plants are excluded from the sector at this time. The excluded sites are very small and together account for a small fraction of the electrical generating capacity in Ontario. Generating stations located on industrial sites (captive plants) are excluded because they would be covered under the specific Regulation for that Industrial Sector.

X SECTOR OVERVIEW

An overview of Electric Power Generation Sector sites is provided in this section. Information such as type of facility, site name, location, generating capacity, and fuel consumed are provided.

Detailed descriptions of individual facilities may be found in Appendix 1, "Summary Data of Electric Power Generation Sector Sites".

Site	Location	Capacity	Fuel
Hydraulic Generating Stations			
Aguasabon GS	Aguasabon River	44 MW	n/a
Arnprior GS	Madawaska River	80 MW	n/a
Sir Adam Beck No. 2 GS	Niagara River	1,328 MW	n/a
Decew No. 2 GS	Old Welland Canal	144 MW	n/a
Pine Portage GS	Nipigon River	132 MW	n/a
Silver Falls GS	Kaministikwia River	48 MW	n/a
Fossil-fuelled Thermal Generating Stations			
Atikokan TGS	Marmion Lake	200 MW	coal
Lakeview TGS	Lake Ontario	2,400 MW	coal
Lambton TGS	St. Clair River	2,000 MW	coal
Lennox TGS	Lake Ontario	2,240 MW	oil
Nanticoke TGS	Lake Erie	4,096 MW	coal
Thunder Bay TGS	Lake Superior	400 MW	coal

Mothballed Fossil-fuelled Thermal Generating Stations

R.L. Hearn TGS	Lake Ontario	1,200 MW	natural gas (orig. coal)
J.C. Keith TGS	Detroit River	264 MW	coal
Thunder Bay TGS (unit #1)	Lake Superior	100 MW	coal

Nuclear-powered Thermal Generating Stations

Bruce NGS-A	Lake Huron	3,056 MW	uranium oxide
Bruce NGS-B	Lake Huron	3,345 MW	uranium oxide
Darlington NGS	Lake Ontario	3,524 MW (future)	uranium oxide
Pickering NGS-A	Lake Ontario	2,060 MW	uranium oxide
Pickering NGS-B	Lake Ontario	2,064 MW	uranium oxide

Facilities Associated With Nuclear Power Generation

Bruce Heavy Water Plants	Lake Huron	800 t/y	n/a
Bruce Nuclear Power Development - Services (includes: Bruce Nuclear Waste Storage Site, Bruce Sewage Processing Plant)	Lake Huron	n/a	n/a
Darlington NGS - Construction	Lake Ontario	n/a	n/a
Chalk River Nuclear Laboratories	Ottawa River	177 MW (thermal)	enriched uranium-aluminum alloy

Douglas Point Waste Management Facility	Lake Huron	n/a	n/a
Nuclear Power Demonstration Waste Management Facility	Ottawa River	n/a	n/a

REFERENCES

1) United States Environmental Protection Agency, "Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category", Washington D.C., November 1982 (EPA-440/1-82/029).

2) Environment Canada, "Environmental Codes of Practice for Steam Electric Power Generation - Design Phase", Ottawa, March 1985 (EPS 1/PG/1).

3) Environment Canada, "Environmental Codes of Practice for Steam Electric Power Generation - Design Phase, Appendices", Ottawa, December 1986 (EPS 1/PG/1A).

4) Energy, Mines and Resources Canada, "Electric Power in Canada", Ottawa, 1988 (M23-7/1987E).

PART B

TECHNICAL RATIONAL FOR THE MONITORING REQUIREMENTS

PART B TECHNICAL RATIONALE FOR THE MONITORING REQUIREMENTS

I INTRODUCTION

The purpose of the technical rationale is to explain the steps in the development of the Electric Power Generation (EPG) Sector Effluent Monitoring Regulation.

This section provides background information on the regulation process, the approaches considered in arriving at the monitoring approach for the Electric Power Generation Sector, the databases, criteria and general and specific rules used for parameter and monitoring frequency selection.

II DEFINITION OF THE ELECTRIC POWER GENERATION SECTOR

The Electric Power Generation Sector consists of facilities at which electric power is generated and includes fossil-fuelled thermal, nuclear-powered thermal and hydraulic generating stations as well as facilities associated with nuclear power generation. In total, there are eighty-nine generating stations and associated facilities in the Electric Power Generation Sector.

The Sector includes all sixty-eight hydraulic generating stations owned by Ontario Hydro. For the purposes of the effluent monitoring regulation, only six of these stations are to be monitored because of the similar processes used at all of the hydraulic generating stations and the minimal potential for environmental impact. These six hydraulic generating stations represent the full range of operating capacities at generating stations within the province.

The facilities associated with nuclear power generation are those which are located at power generation facilities and, in some way, provide a support function to the generating stations. The Bruce Heavy Water Plant and Sewage Processing plant are two such facilities which are associated with the Bruce Nuclear Power Development, but at which electrical power is not actually generated. It was considered appropriate to include such facilities in the Sector as they are owned and/or operated by power generating facilities and provide support to the electric power generation process.

Several of the facilities associated with nuclear power generation are owned by Atomic Energy of Canada Limited. These facilities are included in the Sector for the following reasons:

1. The facilities are regulated by the Atomic Energy Control Board for radionuclide releases only. At this time, the release of conventional and priority pollutants to receiving watercourses are not monitored or regulated.

2. The facilities, at some time, have operated CANDU-type nuclear reactors similar to those used at all other nuclear-powered thermal generating facilities and therefore could generate similar conventional and priority pollutants.

The Electric Power Generation Sector may be defined using the Standard Industrial Classification (SIC) codes, developed in Canada for data gathering purposes by Statistics Canada (1). The Electric Power Systems Industry is classified as SIC code 4911 and includes all fossil-fuelled and nuclear-powered thermal generating stations. SIC code 4999 includes all facilities in the Electric Power Systems Industry which are not elsewhere classified, such as the Bruce Heavy Water Plant and Waste Storage Site. Fossil-fuelled and nuclear-powered thermal generating stations which are under construction are classified under SIC code 4111. Hydraulic generating stations are not classified with a SIC code.

The SIC codes applicable to this Sector and the generating stations and associated facilities classified under these codes are listed in Table 1 of Appendix 2.

III THE NEED FOR REGULATION

Currently the Electric Power Generation (EPG) Sector stations monitor and report only certain standard parameters and conventional pollutants under the Ministry of the Environment's Industrial Monitoring Information System (IMIS).

At this time, only eight of the twenty-seven generating stations and associated facilities to be monitored under the MISA program report information through IMIS.

The data reported to the system include effluent flow and temperature rise for each of the generating stations. In addition, some of the generating stations and associated facilities report the following parameters: pH, biochemical oxygen demand (BOD5), total suspended solids (TSS), volatile suspended solids (VSS), total phosphorus, total Kjeldahl nitrogen (TKN), sulphate, hydrogen sulphides and selected metals.

Monthly average data for each of the generating stations are published by the Ministry of the Environment in an annual report entitled "Report on the Industrial Direct Discharges in Ontario" (2).

Requirements for the standard parameters and conventional pollutants reported under IMIS are imposed by Certificates of Approval. Ministry guidelines are derived from various sources including Provincial Water Quality Objectives (PWQO) and previously published guidelines for industrial sectors.

Provincial Water Quality Objectives are currently available for a total of 74 conventional and priority pollutants, of which 51 are priority pollutants.

Several of the PWQOs are listed in the Ministry of the Environment's publication entitled "Water Management: Goals, Policies, Objectives and Implementation Procedures of the Ministry of the Environment" (3). The Ministry is working towards:

1. Establishing PWQOs or Guidelines for all of the priority pollutants identified on the Ontario Effluent Monitoring Priority Pollutants List (EMPPL) that possess the potential for moderate to high aquatic environmental damage; and
2. Assembling the available aquatic toxicological and other appropriate information for the remaining pollutants on EMPPL and maintaining the capability to set Provincial Water Quality Guidelines on demand.

There are currently no regulations for specific toxic and persistent pollutants in this Sector. Currently only a limited database exists on the concentrations and/or loadings of priority pollutants being discharged into surface watercourses. Historically, monitoring of effluents from this Sector has focused on final discharge points (outfall) only. Special studies have been carried out on discharges from coal pile treatment system and ash transport water system discharges. Process effluents which may contain priority pollutants have not generally been monitored at the source. Conventional parameters have been monitored at certain sites routinely.

Environment Canada has published a document entitled "Environmental Codes of Practice for Steam Electric Power Generation - Design Phase" (4,5). The Design Phase Code was developed by a federal-provincial-industry Task Force, and includes data and recommendations for the design of thermal power station water and wastewater systems. These environmental protection standards include recommendations for monitoring facilities, as summarized in Table 10 (Appendix 2).

The Atomic Energy Control Board (AECB) is a federal regulatory agency with jurisdictional authority over nuclear-powered thermal generating stations which implements control through a licensing system. The AECB controls the discharge of radionuclides.

The lack of information and of suitable regulatory requirements from any jurisdiction defines the need for a comprehensive database on the discharge of conventional and priority pollutants from generating stations and associated facilities in the Electric Power Generation Sector. As outlined in the Ministry of the Environment's White Paper (6), the MISA Effluent Monitoring Regulation for the Electric Power Generation Sector will provide this technically sound database.

An effluent limits regulation for the Electric Power Generation Sector will be based on the database developed under the effluent monitoring regulation in conjunction with data on Best Available Technology Economically Achievable (BATEA). The effluent limits regulation will ensure that the required technology is put in place to provide treatment of priority pollutants in process effluents and will work towards the goal of virtual elimination of toxic pollutants discharged to surface watercourses.

IV THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND ENVIRONMENT CANADA EXPERIENCE

Primary effluent limitations guidelines for the Steam Electric Power Industry were originally published by the U. S. Environmental Protection Agency in October 1974. The guidelines addressed only fossil-fuelled and nuclear-powered thermal generating stations. Hydraulic generating stations were not addressed as they are not part of the steam electric power industry and their direct discharges are considered to have minimal environmental impact. As a result of successful court challenges, the following events occurred:

> A Settlement Agreement in June of 1976 between the Natural Resources Defense Council (NRDC) and the U.S. EPA required that the EPA develop and promulgate effluent limitations guidelines reflecting Best Available Technology Economically Achievable (BATEA), standards of performance for new sources and pretreatment standards for existing and new sources for 21 major industries in the U.S.
>
> In July of 1976, the U.S. Court of Appeals remanded for reconsideration various parts of the October 1974 effluent limitations guidelines for the Steam Electric Power Industry.
>
> Amendments to the Clean Water Act in 1977 required the review and revisions, if appropriate, of each effluent limitation or standard to be promulgated by U.S. EPA at least every three years. This requirement has not been implemented in this sector in the U.S.

As portions of the 1974 effluent limitations guidelines were remanded, the U.S. EPA initiated further studies and data gathering from representative facilities in the Steam Electric Power Industry in order to obtain a stronger basis for issuing new effluent limitations guidelines.

New effluent limitations guidelines for the Steam Electric Power Industry were published in November of 1982 and is entitled "Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category" (7).

The Steam Electric Point Source Category includes fossil-fuelled and nuclear-powered thermal generating stations. The limitations imposed are identical for both types of generating stations and include limitations for the following pollutants: pH, total suspended solids, solvent extractables (oil & grease), copper, iron and PCB's. In addition, total residual chlorine (TRC) and total residual oxidants (TRO) are limited on once-through cooling water streams.

The MISA Monitoring Regulations for the Electric Power Generation Sector are consistent with applicable recommendations (Table 10, Appendix 2) of Environment Canada's Design Phase Code, and are generally more comprehensive and stringent than the Code recommended practices as well as the U.S. Effluent Limitations Guidelines of 1982. The rationale for this approach is that the data base will be used to develop BATEA driven limits of the 1990's for the EPG Sector of Ontario.

The MISA program is taking the approach of developing a statistically valid database by requiring all of the facilities in the Electric Power Generation Sector to carry out twelve months of monitoring for a list of conventional and priority pollutants on each of its effluent streams with the potential for contamination from process materials. The monitoring data is to be obtained through an effluent monitoring regulation which specifies sampling and analytical protocols, parameters and frequency of monitoring, flow measurement, toxicity testing and reporting requirements for each of the stations/facilities in the Sector.

V THE MINISTRY / ELECTRIC POWER GENERATION SECTOR DIALOGUE

The Ministry adopted an open consultative process with representatives from the Sector in developing the Effluent Monitoring Regulation for the Electric Power Generation Sector. The MISA Advisory Committee (MAC) provided input to the development process. Members of this committee are appointed by the Minister of the Environment on the basis of their knowledge, concern and expertise in matters dealing with the environment.

A Joint Technical Committee (JTC) consisting of representatives from the Sector, the Ministry and Environment Canada was established as a means for developing the monitoring regulation and its requirements through a consensus building approach as far as possible. The Sector was represented by Ontario Hydro, as they are currently the owners and/or operators of all of the generating stations in the Sector. A member from the Atomic Energy Control Board (AECB) and two members from Atomic Energy of Canada Ltd. also sat on the committee on a voluntary basis, for the purposes of receiving and providing information on the program. A member of the MISA Advisory Committee was also invited to take part in the JTC discussions.

Agreement was reached with Sector representatives on the principles which were to serve as general guidelines for the development of the monitoring regulation. A subcommittee of Ministry and Environment Canada representatives used the guidelines to develop the technical rationale to establish monitoring requirements for the Sector. A Regulation Writing Subcommittee consisting of Ministry, Environment Canada and Sector representatives then drafted a regulation for review by all members of the JTC.

On the basis of the technical rationale, and U.S. EPA / Environment Canada experience and databases available to the Ministry, monitoring requirements for effluent streams at each of the stations were established. The monitoring requirements were subsequently reviewed with representatives of the Sector and modified where warranted by technical and practical considerations.

VI APPROACHES TO ROUTINE MONITORING

The simplest approach to the development of monitoring requirements for the Sector would be to have a single uniform requirement for all of the generating stations in the Sector, regardless of the method used to generate power at a station. However, the Sector consists of hydraulic generating stations, fossil-fuelled thermal generating stations, nuclear-powered thermal generating stations and facilities associated with nuclear power generation, which produce or aid in the production of electric power using different technologies and with different process materials. A single uniform requirement is therefore not practical nor cost effective for this Sector.

Environment Canada, in documenting its Design Codes of Practice for the Steam Electric Power Industry (4,5), applied a general approach for the purpose of developing the guidelines. In this document, environmental concerns associated with water-related and solid waste activities of the steam electric plant are discussed. This approach was found to be unsuitable for the development of the monitoring regulation for this Sector as it applied uniform requirements and did not take into consideration hydraulic generating stations.

The approach used by the U.S. EPA in regulating power generating stations in the Steam Electric Point Source Category is a generic stream-specific approach which regulates pollutant discharges from both fossil-fuelled and nuclear-powered thermal generating stations, and does not differentiate between methods of power generation. Hydraulic generating stations are not regulated under the U.S. EPA in this category.

Recognizing the differences in methods used to generate power at each of the generating stations, it was concluded that the most appropriate approach for the development of monitoring requirements for this Sector is one based on the method used for power generation. The following subsectors were established in the Electric Power Generation (EPG) Sector:

1. Hydraulic generating stations.
2. Fossil-fuelled thermal generating stations.
3. Nuclear-powered thermal generating stations.
4. Facilities associated with nuclear power generation.

VII THE SUBSECTOR-SPECIFIC MONITORING APPROACH

The subsector-specific monitoring approach addresses similarities in effluent streams from generating stations due to similarities in processes used, process materials and effluent treatment available. However, it was recognized that site-specific considerations at some of the stations may require modifications to the subsector approach at a particular station or facility.

There are 68 hydraulic generating stations in Ontario. Effluents from these stations do not vary widely and consist of once-through cooling water, potentially contaminated building effluent and storm water. The release of process materials, such as oils and greases used for lubrication, is monitored by consumption. Six representative sites were chosen from the 68 hydraulic generating stations. A subsector-specific approach is therefore suitable for hydraulic generating stations.

Fossil-fuelled thermal generating stations include those fuelled by coal, oil or natural gas. This subsector consists of eight stations, five of which burn coal and one of which burns oil. Also included in this subsector are two mothballed stations (the station is shut down but the equipment is stored and maintained operational) which have the potential to discharge pollutants through storm water runoff. The similarities in this subsector warrant that generic subsector-specific monitoring requirements be developed for all of the generating stations in this subsector.

The nuclear-powered thermal generating stations in this Sector all use the same methods of power generation and therefore a subsector-specific monitoring approach is suitable.

Facilities associated with nuclear power generation each required site-specific monitoring requirements due to their differences in processes, process materials and effluent treatment available.

Monitoring will be required on all process effluent streams prior to dilution. However, in cases where the process effluent streams are not segregated from other effluent streams, a combined effluent stream will be monitored. This is consistent with the other industrial sectors to be regulated under the MISA program. As all of the generating stations in the Sector use a vast quantity of cooling water, the potential for dilution of both conventional and priority pollutants at the point of final discharge from the station is great.

Final effluent streams (final outfalls) from each of the generating stations will be monitored as once-through cooling water effluent streams, as the streams will be about 95% once-through cooling water at this point. Dilution of the process effluents will mask the concentration of contaminants discharged in the final effluent and will not provide an indication of the actual impact of the process effluent streams on the receiving watercourse. However, any effluent limits to be developed would be based on process effluent streams prior to dilution and masking of the contaminants.

Other effluent streams, such as storm water, coal pile effluent, waste disposal site effluent, potentially contaminated building effluent, equipment cleaning effluent and emergency overflow effluent, which have the potential for contamination by process materials or process effluent and which discharge to a surface watercourse, are also required to be monitored.

Subsector-specific and site-specific monitoring schedules were developed for each of the generating stations and associated facilities to reflect the monitoring requirements on each of the effluent streams at the stations. Biological monitoring requirements are required for certain effluent streams. Toxicity testing using both the fish toxicity test (Rainbow trout) and the Daphnia magna acute lethality toxicity test is required.

VIII PARAMETERS FOR ROUTINE MONITORING

a) Ontario Effluent Monitoring Priority Pollutant List (EMPPL):

The monitoring schedules developed for the generating stations and associated facilities in the Sector include both conventional and priority pollutants. The list of priority pollutants to be monitored is based on a subset of the 1988 Ontario Effluent Monitoring Priority Pollutants List (EMPPL).

The derivation of the EMPPL is fully documented in a Ministry report dated July 1988 (8). The Effluent Monitoring Priority Pollutants List (EMPPL) includes those chemicals detected in Ontario municipal and industrial effluents and in Ontario waterways which pose a hazard to the receiving environment because of their toxicity and persistence. The potential presence of a chemical based on use and manufacturing data could also have placed it on the EMPPL.

The EMPPL is not a static list of chemicals of concern, but one which will be revised at regular intervals to reflect additional chemicals which are promoted to the list as a result of information on their toxicity or persistence as assessed under EMPPL criteria. The 1988 EMPPL listed 179 chemicals. A review of toxicity and persistence criteria of other chemicals identified as present in effluents from particular industrial sectors has resulted in an additional 87 chemicals being added to EMPPL. The list will continue to expand and include new chemicals of concern as additional information is available.

The Electric Power Generation Sector list for effluent monitoring is derived from a subset of the revised 1988 EMPPL. The EPG Sector list includes 136 chemicals on the revised EMPPL for which validated analytical protocols are available. Analytical test groups 13 (Total alkyl lead) and 18 (Volatiles, Water Soluble) were excluded from the EPG Sector list as there is no evidence to suggest that these compounds could be present in the effluents from this Sector, nor are they used by the generating stations and their associated facilities.

Table 2 of Appendix 2 lists the chemicals on the revised 1988 EMPPL. The chemicals are listed as belonging to an analytical test group, derived for the purpose of the monitoring regulations. Those chemicals with validated analytical protocols available are noted as such.

In addition to the priority pollutants on the EPG Sector list, conventional pollutants and pollutants of specific concern to this Sector are to be monitored. Table 3 in Appendix 2 lists the conventional pollutants, sector-specific pollutants and EMPPL priority pollutants arranged by analytical test group. These pollutants form the basis of monitoring in the EPG Sector.

b) Radioactive Emissions from Nuclear-Powered Thermal Generating Stations Associated Facilities: (Source: AECL/AECB)

The EPGS regulation does not include a requirement to monitor the releases of radioactive materials from nuclear facilities since the limits (both concentration and total loading) and the reporting requirements are set by the Federal Government through the Atomic Energy Control Board (AECB). It is the AECB which regulates the public safety requirements for radioactive materials emissions. These requirements are set by using guidelines which are used in most countries around the world.

i) Effluent Monitoring: Monitoring for radioactivity occurs in individual streams, in the outfall and in the environment around the station. The AECB requires that the nuclear-powered thermal generating facilities and associated facilities be able to detect leaks of radioactive water into cooling water streams which have been through a heat exchanger in contact with reactor water. Some streams are fitted with continuous monitors which can detect leakage of reactor water into the cooling water. These monitors alarm as soon as there is any leakage, warning the operator of the abnormal condition. Routine sampling of the water is carried out using an independent analytical method.

The CANDU reactor uses heavy water. This water contains almost all of the mobile radioactivity. Leakage is collected and the water is cleaned, upgraded and returned to the reactor. In this way an estimated 99% of the radioactivity is removed and recycled back into the reactor.

The facilities are designed so that all floor drains in areas where there may be radioactivity must flow to radioactive sumps. These sumps are pumped out to a large collection tank (the Radioactive Liquid Waste Management System Tank - RLWMS), and if the radioactivity level is high then the water is sent to a separate tank for treatment.

The RLWMS tanks fill up during normal operation of the station collecting water from the floor drains, showers, laundry and clean up facilities. The tank fills to a set point, and is then isolated from the drainage system so that no new water can enter the tank. Water enters the next receiving tank. The isolated tank water is placed in a recirculating mode so that the contents of the tank are well mixed. After a mixing period of about 4 hours the tank is sampled and the sample analyzed for the heavy water and radioactive materials concentrations by the station staff using procedures that have been accepted by the AECB.

Upon analysis, if the radioactive material concentration in the tank exceeds the allowable concentration, the water is transferred to another system where the water may be cleaned up. The clean-up system is normally only required for a few tanks each year. All of the water pumped out to the environment must meet AECB requirements.

The outfall of the station or facility is sampled on a continuing basis to ensure that any leak or escape of radioactivity from any other source is monitored. This sample is analyzed weekly in a special laboratory using special materials and equipment which allows for an extremely sensitive measure of the radiation levels. If there is a slight increase in the radiation levels above the background level it would be detected and remedial action can then be taken.

ii) Environmental Monitoring: Monitoring is carried out beyond the facility boundary. Samples of the plant and aquatic life in the area of the facility as well as sediment samples are taken to determine if there is any increase in the local levels of radioactive materials. This monitoring is used to confirm the validity of the models used and to confirm that the radioactive materials remain within acceptable levels.

iii) Limits: The AECB requires that the releases of radionuclides into the receiving waters and into the atmosphere must remain below set levels. These levels are set so that the person most affected would not be exposed to an unacceptable risk from radiation and all other persons would be exposed to a lower risk. Modelling of the movement of the radionuclides in the environment is used to determine the maximum allowed release, based on a limit dose of radiation, to a person most affected, of 5 milliSieverts per year (a milliSievert is a unit of effect of radiation).

Canadian nuclear power plants have set a design and operating target of 1% of the dose limit resulting from the combined release of all radionuclides. If the target is exceeded, the facility staff must take action to reduce releases and meet the target. Overall, nuclear power plants are designed to keep releases of radioactivity "As Low As Reasonably Achievable" (ALARA). This means that, if there is a net benefit to reducing releases, then it shall be carried out.

c) Polychlorinated biphenyls (PCB's) at Ontario Hydro:

(Source: Ontario Hydro)

i) Use of PCB's and Inventory:

Polychlorinated biphenyls and Askarels (i.e. blends of PCB's and chlorobenzenes) are causes of great concern to the public due to the possibility of adverse environmental and health related effects that may result from the bioaccumulation or human contact with PCB's or their by-products. Ontario Hydro has large volumes of PCB's and Askarels in service throughout its electrical system as a result of intentional use and unintentional contamination, both of which occurred before Ontario Hydro and the public became aware of the potential hazards of their use.

All the PCB containing equipment at hydraulic generating stations is scheduled to be removed from service and placed into secure storage by the end of 1989.

At the fossil-fuelled stations, there are 521,830 litres of Askarels in use, contained in 586 transformers, 23 magnets, 18 capacitors and 17 other pieces of equipment. There are also 7 storage site containing 4543 litres of Askarels and a number of drums of PCB contaminated solid waste and pieces of equipment taken out of service.

At nuclear-powered thermal generating stations and facilities, there are 204,190 litres of Askarel contained in 169 pieces of equipment still in service. There are also four approved storage sites containing waste Askarel and pieces of out-of-service equipment.

ii) PCB Management:

Ontario Hydro has developed a Mobile Processing Unit for the treatment or cleansing of PCB's from oil with low levels of contamination. In 1988, Ontario Hydro's president directed all Branches to establish a plan and schedule to eliminate all low level liquid PCB's in storage and to develop a plan for the destruction of all high level liquid PCB's and solid PCB contaminated material in storage.

Corporate and Branch policies and procedures have been developed by Ontario Hydro that ensure company compliance with government regulations and encourage responsible handling, transportation and storage practices. Ongoing management practices include the labelling of all PCB-containing equipment and wastes, the provision of containment structures around PCB-containing equipment, monthly inspections of all equipment and the maintenance of accurate inventory records. Emergency action programs have been developed to respond to spills and staff have been trained in proper PCB management techniques.

iii) Program to Eliminate PCB's:

The PCB contaminated oil Retrofilling and Decontamination programs are now well established. These programs are expected to result in the treatment of 80% of all PCB-contaminated insulating oils between 1989 and 1993. During 1989, two Mobile Processing Units will decontaminate 1,250,000 litres of PCB-contaminated oils. As each year of retrofilling program is completed, the program's focus will move successively from larger to smaller transformers, to breakers, to pole-tops and finally to bushings and other miscellaneous equipment.

All of the Askarel or high-level equipment is planned to be phased out by 1998. The costs for phase-out and replacement is estimated at $44.3 million (Ontario Hydro estimate) at fossil-fuelled stations and $18.3 million (Ontario Hydro estimate) at nuclear-powered stations and facilities. At the present time, there is no approved destruction process or facility in Ontario. The equipment taken out of service will be placed in government approved secure storage until an approved destruction process is available.

iv) Measuring PCB's in Effluent Monitoring Regulations:

Certain effluents will be analyzed for PCB's at all the EPGS facilities included under the MISA Effluent Monitoring Regulations. As a result of Ontario Hydro's PCB management program, PCB's would not normally be found in any process effluent stream. The emphasis then, will be to analyze those streams at risk of contamination as a result of spills or leaks. All storm waters, since many drain areas around transformers or other electrical equipment, are to be analyzed. Similarly, certain oily water separators, radioactive liquid waste management system tanks, and sewage treatment plant effluents are to be analyzed, as these systems are designed to receive and treat drains that may be contaminated. Also, all process effluents will be checked for PCB's during quarterly characterization of these effluents.

IX DATABASES USED FOR PARAMETER SELECTION

In the development of the subsector-specific and site-specific monitoring schedules, both current and historical monitoring data of conventional and priority pollutants in effluent streams from the Sector were considered. However, very limited information was available on many of the process effluent streams which necessitated that a pre-regulation monitoring program be established.

A voluntary pre-regulation monitoring program was established with the EPG Sector in order to obtain current data on the presence or absence of chemicals found in representative process effluent, once-through cooling water, potentially contaminated building effluent, storm water, and waste disposal site effluent streams from generating stations and associated facilities in each of the subsectors.

Characterization of effluent streams was conducted at twenty representative facilities, which included eight fossil-fuelled thermal generating stations, three nuclear-powered thermal generating stations and three hydraulic generating stations. Additionally, six facilities associated with nuclear power generation were also monitored. The effluent streams monitored included: intake water, process effluents, coal pile effluent, emergency overflow, yard drains, sumps, and final effluent streams. Table 4 in Appendix 2 provides a summary of the total number of effluent characterizations performed on the effluent streams at each representative generating station and associated facility in the pre-regulation monitoring program. Table 5 in Appendix 2 provides an indication of the presence/absence of the EPG Sector list parameters found in the effluent characterizations on a site-specific basis.

Monitoring of the representative generating stations took place from June 1987 to December 1988. An initial round of sampling in June 1987 was found insufficient to provide the amount of data required for the development of the monitoring requirements. Two additional rounds of sampling were subsequently carried out by some of the generating stations and facilities. As a result, each representative station sampled effluent streams for up to three 12-hour periods for all of the parameters on the EPG Sector list plus additional parameters which are potentially present in the effluents but are not currently listed on EMPPL. All of the generating stations and associated facilities monitored their intake water for the same list of parameters.

As an inspection function, the Ministry also obtained its own 12-hour composite sample as part of the pre-regulation monitoring program from one effluent stream at each station or facility. The samples were collected on one of the days that the station was collecting its pre-regulation samples, during the second or third round of sampling. In addition to monitoring for parameters on the EMPPL, the Ministry ran open characterization analyses on the samples to tentatively identify compounds in the effluents which are not currently on EMPPL.

In response to a Ministry request, all stations in the Sector provided, as part of the pre-regulation monitoring program, comprehensive data on their operations including raw material and product lists, wastewater treatment and current monitoring programs at the station. This supplemental data was also used in the development of the subsector-specific and site-specific monitoring schedules.

The pre-regulation monitoring data was supplemented by historical data and information from the following sources:

- IMIS (Industrial Monitoring Information System);
- Pilot Site Studies (documented in the Preliminary Report - St. Clair River MISA Pilot Site Investigation - November 1987 (9);
- U.S. EPA Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category, November 1982 (7);
- Environment Canada's Environmental Codes of Practice for Steam Electric Power Generation - Design Phase (4,5);
- Ontario Hydro reports - monitoring and site operations data;
- Atomic Energy of Canada's pre-regulation monitoring data;
- Various position papers/reports/proposals tabled by Ontario Hydro and Atomic Energy of Canada Ltd.;

- Best Professional Judgement (BPJ) based on knowledge of processes, products, by-products and raw materials at each station.

The data from the current and historical databases available to the Ministry was reviewed and assessed on a subsector-specific and site-specific basis. The monitoring schedules specify the frequency of monitoring required for each parameter. A comprehensive rationale was developed to provide rules for the assignment of EPG Sector list parameters to daily, thrice weekly, weekly and monthly monitoring categories. The general and subsector-specific parameter and frequency assignment rules are documented in sections XII and XIII.

X CLASSIFICATION OF EFFLUENTS

Unlike other industrial sectors under the MISA program where process effluents are segregated and may be biologically treated prior to discharge, EPG Sector stations commonly have unsegregated streams where process effluents are mixed with cooling water streams. This factor necessitates the monitoring of process effluents prior to any dilution with cooling water in order to establish the potential impact of a process effluent stream.

The effluent streams identified at each of the EPG Sector stations were placed in one of the following eleven classifications:

- process effluent;
- combined effluent;
- boiler blowdown effluent;
- batch discharge effluent;
- event discharge effluent;
- once-through cooling water;
- storm water;
- coal pile effluent;
- waste disposal site effluent;
- potentially contaminated building effluent;
- equipment cleaning effluent;
- emergency overflow effluent.

Process Effluent

Process effluent streams include effluents from process areas in each of the generating stations in each subsector, with the exception of hydraulic generating stations. Hydraulic generating stations have no process effluent streams.

Following is a list of process effluents by subsector:

Hydraulic Generating Stations

- none

Fossil-Fuelled Thermal Generating Stations

- ash transport water system effluent;
- oily water separator;
- water treatment plant neutralization sump effluent.

Nuclear-Powered Thermal Generating Stations

- water treatment plant neutralization sump effluent.

Facilities Associated with Nuclear Power Generation

- condensate plant water treatment plant effluent;
- sewage treatment plant effluent;
- heavy water plant process effluent;
- water treatment plant effluent;
- waste treatment center effluent.

Batch Discharge Effluent

Batch discharge effluent is a process effluent that is discharged on a routine basis. Batch discharges originate from wastewater treatment systems that do not have a continuous discharge of effluent. Only Radioactive Liquid Waste Management System Tanks at nuclear-powered thermal generating stations and the Chalk River Waste Treatment Centre are required to sample for batch discharge effluent.

Batch discharge effluent streams are considered as process effluent streams for all purposes of the General Regulation.

Event Discharge Effluent

Event discharge effluent is a process effluent that is discharged on an event basis. Event discharge effluent originate from wastewater treatment systems that do not have a continuous daily discharge of effluent. All of the generating stations except hydraulic stations are required to monitor for event discharge effluent.

Combined Effluent

Combined effluent streams are required to be monitored where individual process effluent streams cannot be monitored prior to dilution with cooling water because of physical constraints. Combined effluent streams are present at two of the facilities associated with nuclear power generation.

The monitoring requirements for combined effluents are as stringent as those for related process effluent streams. There is no pre-regulation monitoring data available on the combined effluent streams from Bruce Nuclear Power Development - Services, however the major contributor to these streams is the boiler blowdown effluent which is similar in character to the Bruce NGS-A boiler blowdown effluent.

Boiler Blowdown Effluent

Boiler blowdown effluent is required to be monitored at each of the fossil-fuelled and nuclear-powered thermal generating stations. Boiler blowdown effluent streams are considered as process effluent streams for all purposes of the General Regulation, with the exception that the streams are sampled on a rotational basis for each of the operational units at a station and there are different flow measurement requirements. This requirement reflects the fact that boiler blowdown effluent should be of consistent quality across the units at an individual station. An example of a rotational sampling schedule is provided in Table 6 of Appendix 2.

The rotational sampling schedule provides for a minimum of twelve samples to be collected from each station and for sampling of each operational unit at least twice over the monitoring period of one year, regardless of the number of units at a station. Sampling of operational units is required to be spread out evenly throughout the year to the extent allowed by the operating schedule and by factors such as unit downtime.

At nuclear-powered thermal generating stations, each of the operational units has multiple boilers. Therefore, in order to obtain a representative sample from the operational unit, the sample collected will be a composite sample from each boiler blowdown line.

Coal Pile Effluent

Coal pile effluents are discharges from coal piles which result from storm-related events and are considered as storm water for the purposes of all obligations under the General Regulation. Coal pile effluent has previously been identified as being a major source of contamination in this subsector and is required to be monitored prior to any treatment.

Potentially Contaminated Building Effluent

Potentially contaminated building effluent results from sources within the station buildings which could include: effluent from equipment drains, floor drains, trenches, or sumps that are connected to; once-through cooling water streams, yard drains, or directly to a surface watercourse.

Specifically, this would include drainage effluent from coal bunkers, coal conveyors and pulverizers, coal or oil-fuelled boilers, ash handling equipment, chemical storage and handling, and equipment maintenance shops. Each of the generating stations and associated facilities may have several points of discharge through sumps.

For the purposes of the General Regulation, potentially contaminated building effluent is considered as waste disposal site effluent, as the effluent is normally discharged on an event basis triggered by high liquid levels in a sump.

Equipment Cleaning Effluent

Equipment cleaning effluent results from discharges from the periodic chemical cleaning of boilers, air preheaters and heat exchangers, and from periodic wet lay-up of boilers. For the purposes of the General Regulation, equipment cleaning effluent is considered as waste disposal site effluent since the effluent is discharged solely on an event basis.

Once-through Cooling Water

Once-through cooling water is required to be monitored at the final outfall after the addition of process effluents and other effluent streams as applicable. Once-through cooling water will be monitored at all of the generating stations and some of the associated facilities.

XI MONITORING FREQUENCIES FOR THE SECTOR

The subsector-specific and site-specific monitoring schedules in the EPG Sector monitoring regulation set out four basic frequencies of routine monitoring - daily, thrice weekly, weekly and monthly. The more stringent requirements for daily, thrice weekly and weekly monitoring are placed on process effluent, batch discharge effluent, combined effluent and boiler blowdown effluent streams in order to provide a statistically sound database for use in the development of effluent limits for these streams.

As a result of the large amount of dilution that once-through cooling water provides, monthly monitoring is required in order to obtain an indication of the potential impact of the effluent on the receiving watercourse.

Due to the intermittent nature of the discharges and relatively low volumes released, storm water, event discharge effluent and coal pile effluent require monthly monitoring at the time of discharge. Similarly, waste disposal site effluent is storm event driven so that monitoring at the time of discharge is adequate. Potentially contaminated building effluent, equipment cleaning effluent and emergency overflow effluent are event based and are required to be monitored at the time of discharge or monthly whichever is less. Monitoring of these streams will provide an estimation of the potential impact on the receiving watercourse in comparison to process effluent streams.

Daily Monitoring

Daily parameter concentrations, when multiplied by daily flowrate, will provide daily loadings. The parameters chosen for daily monitoring are conventional parameters which may act as surrogates for other contaminants, and are possible indicators of treatment effectiveness and of process upsets.

Continuous on-line analysis for pH and specific conductance is the preferred method of monitoring. Average concentration levels do not give a true indication of instantaneous discharges.

On-line instrumentation will:

- measure short term spikes;
- allow determination of effluent variability by providing an indication of the variation of the recorded parameters with time;
- eliminate problems resulting from storage of samples;
- allow the combination of automatic monitoring systems with an alarm system that will give advance warning when a high concentration of an undesirable parameter occurs.

Data from daily monitoring will be used to provide an estimate of operational variability and to establish the daily versus monthly variability to establish future daily limits in relation to monthly limits.

Thrice Weekly Monitoring

Thrice weekly monitoring is chosen for parameters that are candidates for limit setting under the effluent limits regulation. The thrice weekly frequency will provide twelve data points for calculating monthly averages of both conventional and priority pollutants. Sample sizes smaller than twelve may lead to unrepresentative data and may fail to show the true variability of the data.

The thrice weekly monitoring data will be used to:

- calculate monthly loadings and concentrations;
- provide a record of parameter variability including process load variations, treatment system upsets and spills;
- establish a basis of comparison for parameters monitored at other frequencies;
- aid in identifying parameters that require control;
- provide a basis for comparison of stations within the Sector;
- establish a basis for inter-sector comparison of loadings for these parameters;

Weekly Monitoring

Weekly monitoring requirements are an economic and technical compromise between thrice weekly and monthly data. The weekly monitoring frequency will provide estimates of both concentrations and loadings which will assist in defining any future monitoring requirements.

The weekly monitoring data will be used to:

- verify the presence or absence of compounds;
- provide estimates of the concentrations and variability of the compounds for comparison with BATEA performance levels to evaluate the need for control of these compounds;
- determine the need for further monitoring for a given compound and to establish that frequency.

Monthly Monitoring

Monthly monitoring of relatively long lists of parameters is required to establish the presence or absence of contaminants of concern. The concentration data will be used in conjunction with flow measurement data to estimate annual loadings for each of the compounds detected. Monthly monitoring will also be used in the interpretation of toxicity data.

Monthly monitoring for selected analytical test groups is also required to determine the presence or absence of contaminants in the analytical test group. These analytical test groups are selected on the basis that at least one contaminant in the analytical test group is being monitored on a daily, thrice weekly or weekly basis. Analytical test groups are comprised of similar compounds so that the presence of one member may be indicative of other members also being present.

XII PARAMETER / FREQUENCY ASSIGNMENT - GENERAL RULES

Based on knowledge of this Sector, pre-regulation monitoring and historical data, and other background information, it was concluded that the monitoring of conventional and inorganic contaminants would be the focus of concern for this monitoring regulation.

The development of the subsector-specific and site-specific monitoring schedules for each of the subsectors was based on the following general guidelines:

A. The monitoring frequency for a given parameter is a function of the parameter type, the parameter concentration and effluent stream classification.

B. Each process effluent, boiler blowdown effluent, batch discharge and combined effluent stream will be monitored for parameters that are characteristic of the processes used in the particular subsector.

C. All generating stations and associated facilities must monitor for the following core parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS) and solvent extractables.

  - These core parameters reflect the general level of environmental control achieved at the stations and facilities and will be useful for comparison purposes.
  - These core parameters are potential surrogates for other parameters.

D. For process effluent, combined effluent, boiler blowdown effluent and batch discharge effluent streams, the detection of one member of an analytical test group from the EPG Sector list at a level equal to or greater than the Ministry of the Environment analytical method detection limit (MDL), in the pre-regulation monitoring data, required the whole test group to be included for monthly/event monitoring.

- A conservative approach was adopted to ensure a comprehensive monitoring database.
- Analytical test groups are comprised of similar or homologous compounds so that the presence of one member is quite likely an indicator that the remaining members of the group could be present.

E. Storm water, coal pile effluent, waste disposal site effluent, potentially contaminated building effluent, equipment cleaning effluent and emergency overflow effluent streams in all subsectors will be monitored for the following core group of parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS) and solvent extractables.

- These parameters will facilitate a comparison of loadings from other effluent streams.

F. Stations or facilities with biological treatment (sewage treatment plants) must monitor the effluent stream for volatile suspended solids (VSS), total phosphorus and nitrogen (TKN, NH_3, nitrates + nitrites).

- These performance parameters are indicators of treatment plant performance in the case where nitrification/denitrification is used.

G. All generating stations and associated facilities will conduct toxicity testing on the following effluent streams: process effluent, combined effluent, boiler blowdown effluent, batch discharge effluent, event discharge effluent and once-through cooling water, except, when these effluents are being discharged along with other effluents for which toxicity testing is being conducted.

H. Parameters that are currently being monitored under the Industrial Monitoring Information System (IMIS) or a Certificate of Approval will be monitored at their existing frequency unless increased under this Regulation.

I. Best professional judgement was used for inclusion of process materials in the monitoring schedules based on high levels of use, even if none were found in the effluents above their MDL.

J. Best professional judgement was used for increasing frequencies above baseline requirements for special situations.

XIII PARAMETER / FREQUENCY ASSIGNMENT - SPECIFIC RULES

The rules used for the development of the monitoring schedules are specific to each subsector and, in some cases, specific to each generating station or associated facility.

In addition, the monitoring requirements for each subsector are placed on certain process effluent, boiler blowdown effluent, batch discharge, event discharge and combined effluent streams, and are indicative of the processes and process materials which contribute to that effluent stream. Not all process effluent, combined effluent, batch discharge, event discharge and boiler blowdown effluent streams at a generating station or associated facility are required to monitor for the same parameters.

A) PROCESS EFFLUENT, COMBINED EFFLUENT, and BOILER BLOWDOWN EFFLUENT

Hydraulic generating stations have no process effluent, combined effluent, or boiler blowdown effluent streams.

Monitoring is specified for all process effluent, batch discharge and combined effluent streams at all fossil-fuelled and nuclear-powered thermal generating stations, and at several of the facilities associated with nuclear power generation. Boiler blowdown effluent streams are required to be monitored at fossil-fuelled and nuclear-powered thermal generating stations.

1) Daily Monitoring

All process effluent, combined effluent, and boiler blowdown effluent streams in all subsectors are required to monitor for pH and specific conductance.

The following is a summary of the daily monitoring requirements on a subsector basis:

> Fossil-fuelled thermal generating stations are required to monitor process effluent and boiler blowdown effluent streams for some or all of the following parameters: pH, specific conductance and total suspended solids.
>
> Nuclear-powered thermal generating stations are required to monitor certain process effluent, batch discharge effluent and boiler blowdown effluent streams for some or all of the following parameters: pH, and specific conductance.
>
> The facilities associated with nuclear power generation are required to monitor certain process effluent, combined effluent and boiler blowdown effluent streams for some or all of the following parameters: pH, specific conductance, total suspended solids (TSS) and sulphide.

The reasons for monitoring each of the listed parameters in each of the subsectors and a short description of what is measured with each parameter are summarized below.

pH

- a measure of the hydrogen ion concentration which indicates the acidity/alkalinity level in an effluent;
- pH and pH changes may alter the toxicity of pollutants to aquatic life;
- low and high pH values cause corrosion and may cause metals to dissolve from sludges and bottom sediments;
- PWQOs require pH to fall within the range of 6.5 - 9.5 in the final effluent stream to the receiving water (3);
- each of the subsectors are required to monitor pH daily as a gross indicator of effluent quality.

Specific Conductance

- indicator of the presence of dissolved inorganic salts which can impact aquatic organisms;
- each of the subsectors are required to monitor this daily as an indirect measure of the dissolved solids in the effluent;

Total Suspended Solids (TSS)

- gross measure of suspended material including volatile suspended solids (organic) and inorganic materials;
- organic fractions may include grease, oils, fibers, microorganisms and dispersed insoluble organic compounds;
- inorganic materials include sand, silt, clay and insoluble metal compounds;
- measure of the effectiveness of treatment system separation equipment;
- may be a substrate for toxic contaminants which can leach out in water;
- required to be monitored at fossil fuelled thermal generating stations because of the potential impact from ash transport systems, nuclear powered thermal generating stations and at associated

facilities at which biological sewage treatment is provided.

Sulphide

- hydrogen sulphide is toxic to aquatic life (a function of temperature, pH and dissolved oxygen);
- required to be monitored at Bruce Heavy Water Plant because of the large usage of hydrogen sulphide in the process.

2) Thrice Weekly Monitoring

i) Conventional Pollutants

The conventional pollutants chosen for thrice weekly monitoring serve as general indicators of the potential impact of a process effluent, combined effluent or boiler blowdown effluent on the receiving watercourse. In certain cases, these parameters can also indicate treatment system performance. Ministry industrial effluent guidelines were used as a trigger above which thrice weekly monitoring would be required.

The following is a summary of the thrice weekly monitoring requirements on a subsector basis:

Fossil-fuelled thermal generating stations are required to monitor certain process effluent and boiler blowdown effluent streams for some or all of the following parameters: ammonia plus ammonium, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), volatile suspended solids (VSS), phenolics and solvent extractables.

Nuclear-powered thermal generating stations are required to monitor certain process effluent, and boiler blowdown effluent streams for some or all of the following parameters: ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), volatile suspended solids (VSS) and solvent extractables.

The facilities associated with nuclear power generation are required to monitor certain process effluent, batch discharge effluent, boiler blowdown effluent and combined effluent streams for some or all of the following parameters: ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), volatile suspended solids (VSS), solvent extractables and phenolics.

The reasons for monitoring each of the listed parameters in each of the subsectors and a short description of what is measured with each parameter are summarized below.

Ammonia plus Ammonium (Total Ammonia)

- a measure of both ionized and un-ionized ammonia in effluents;
- ammonia is toxic to fish at levels above 0.02 mg/L (un-ionized, Ministry PWQO for this form of ammonia);
- the concentration of ammonia in its un-ionized state varies with pH and temperature;
- a concentration of 10 mg/L of total ammonia (approx. equivalent to 0.04 mg/L of un-ionized NH_3 (pH = 7; T = 20 degrees C) in the effluent was selected as the concentration at and above which thrice weekly monitoring is required. The PWQO for ammonia is 0.02 mg/L un-ionized ammonia.;
- required to be monitored at certain process effluent, combined effluent and boiler blowdown effluent streams in each of the subsectors as ammonia is used for pH adjustment in some boilers. Ammonia may also be concentrated in water treatment plant effluents.

Total Kjeldahl Nitrogen (TKN)

- a measure of both organic nitrogen and total ammonia;
- measure of nitrification in sewage treatment plants;
- required to be monitored at certain process effluent and combined effluent streams in nuclear-powered thermal generating stations and associated facilities because it provides a measure of the total organic nitrogen in an effluent and is a potential parameter for control in sewage treatment plants.

Total Nitrates + Nitrites

- measure of denitrification in sewage treatment plants with nitrification;
- Ministry Drinking Water Objectives (health related) for total nitrates plus nitrites ($NO_3 + NO_2$) of 10 mg/L was used as the concentration at or above which thrice weekly monitoring is required;
- required to be monitored at certain process effluent and combined

effluent streams in each of the subsectors because it is a potential parameter for control.

Dissolved Organic Carbon (DOC)

- a measure of overall soluble organic carbon loading to the environment;
- potentially present in the effluent streams as a result of the usage of lubricating oils and greases, transformer oils, hydraulic fluids;
- required to be monitored at certain process effluent and combined effluent streams in each of the subsectors as it is a general process indicator and detects low levels of organic carbon in the effluents (MDL = 0.5 mg/L).

Total Organic Carbon (TOC)

- required whenever TSS concentration is greater than 15 mg/L to ensure that the significant particulate organic component is not missed as would be the case by doing DOC only;
- a relatively high detection limit of 5 mg/L precludes its general use in place of DOC;
- a measure of both particulate and dissolved organic carbon;

Total Phosphorus (Total P)

- phosphorus discharges to the Great Lakes are identified as a concern in the Canada-U.S. Great Lakes Water Quality Agreement;
- sewage treatment plant discharge guidelines = 1.00 mg/L;
- required to be monitored on certain process effluent and combined effluent streams in each of the subsectors where phosphates are added to the raw water conditioning process, boilers or at STPs.

Volatile Suspended Solids (VSS)

- a component of total suspended solids (TSS);
- measure of the organic biological floc associated with biological treatment systems;
- biological floc can be a carrier by adsorption for metals and less volatile organics;

- measure of the performance of separation equipment (clarifier) used in removing organic solids in biological treatment systems;
- required to be monitored on certain process effluent streams in each of the subsectors where there are oily water separators and in sewage treatment plants.

Phenolics (4AAP)

- the 4-amino antipyrine (4AAP) method measures total phenolics;
- tend to be ubiquitous contaminants and are thus good indicators of pollution severity;
- can taint fish at 1 ppb concentration;
- can be general indicators of treatment;
- required to be monitored on certain process effluent and combined effluent streams at fossil-fuelled thermal generating stations, nuclear-powered thermal generating stations and their associated facilities because it may potentially be concentrated through the boiler water demineralizing process or be associated with oils in oily water separators.

Solvent Extractables (Oil and Grease)

- measure of the gross hydrocarbon that could produce a visible film, sheen or discoloration on the surface of a watercourse;
- substances measured may include hydrocarbons, soaps, fats, oils and waxes;
- measure of groups of substances whose common characteristics is their solubility in Freon TM or hexane;
- can be a carrier for other toxic contaminants;
- required to be monitored in certain process effluent, combined effluent and boiler blowdown effluent streams in each of the subsectors because of the usage of lubricating oils and greases, transformer oils, fuel oils and hydraulic fluids at the facility.

ii) Priority Pollutants

Thrice weekly monitoring for all other priority pollutants in the EPG Sector List was established using U.S. EPA data. Priority pollutants found in the databases available to the Ministry at concentrations above the medians of the long-term weighted means (LTM) listed by the U.S. EPA for BATEA facilities (Table 8 in Appendix 2) were placed in the thrice weekly monitoring category. The LTMs were established for the Organic Chemicals, Plastics and Synthetic Fibers Category for which BATEA has been determined to be biological treatment. Although the Electric Power Generation Sector is mainly inorganic in nature, the LTM values provide a framework on which to base a thrice weekly monitoring frequency assignment.

In all process effluents, combined effluent, and boiler blowdown effluent streams, copper, zinc and iron are required to be monitored thrice weekly at fossil-fuelled and nuclear-powered generating stations. In cases where total copper, zinc and iron are required to be monitored thrice weekly at fossil-fuelled thermal generating stations, total metals are required on a weekly basis instead of monthly. This is in recognition of the fact that fossil-fuelled thermal generating stations plan to ship their samples to outside laboratories equipped with inductively coupled plasma (ICP) devices. Iron, although it is not a priority pollutant on EMPPL, is required to be monitored as it is a key parameter of concern for this Sector. These requirements reflect the results of the pre-regulation monitoring data and the approach taken by U.S. EPA to control the discharge of these parameters. The pollutants result through concentration in the boiler water demineralizing process or as a result of scale buildup.

3) Weekly

i) Conventional Pollutants

Weekly monitoring data for conventional pollutants will be used to determine the need for further monitoring for a given compound and to establish the appropriate monitoring frequency to allow the generation of data for future limits setting and control.

Weekly data will also be used to provide estimates of both monthly and long term loadings for reporting to other jurisdictions.

The following is a summary of the weekly monitoring requirements on a subsector basis:

> Fossil-fuelled thermal generating stations are required to monitor certain process effluent and boiler blowdown effluent streams for some or all of the following parameters: total Kjeldahl nitrogen, nitrates plus nitrites, total phosphorus, solvent extractables and phenolics.
>
> Nuclear-powered thermal generating stations are required to monitor certain process effluent and boiler blowdown effluent streams for some or all of the following parameters: ammonia plus ammonium, total Kjeldahl nitrogen, total phosphorus, sulphide, solvent extractables and phenolics.
>
> The facilities associated with nuclear power generation are required to

monitor certain process effluent, boiler blowdown effluent and combined effluent streams for some or all of the following parameters: total Kjeldahl nitrogen, nitrates plus nitrites, total phosphorus, total suspended solids, phenolics and solvent extractables.

ii) Priority Pollutants

Priority pollutants, listed in the EPG Sector List (Table 3 of Appendix 2), which were found at least once in the databases available to the Ministry above the Ministry MDL but below the long-term weighted means listed by the U.S. EPA for the Organic Chemicals BATEA facilities (Table 8 in Appendix 2), were placed in the weekly monitoring category.

4) Monthly

i) Conventional Pollutants

Monthly monitoring for conventional pollutants is required for all process effluent, combined effluent and boiler blowdown effluent streams in the respective subsectors and associated facilities.

The following is a summary of the monthly monitoring requirements on a subsector basis:

> Fossil-fuelled thermal generating stations are required to monitor certain process, and boiler blowdown effluent streams for some or all of the following parameters: ammonia plus ammonium, total kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), phenolics and solvent extractables.
>
> Nuclear-powered thermal generating stations are required to monitor certain process effluent, and boiler blowdown effluent streams for some or all of the following parameters: nitrates plus nitrites and solvent extractables.
>
> The facilities associated with nuclear power generation are required to monitor certain process effluent, boiler blowdown effluent discharge effluent and combined effluent streams for some or all of the following parameters: ammonia plus ammonium, total kjeldahl nitrogen, nitrates plus nitrites, total organic carbon (TOC), total phosphorus, total suspended solids (TSS), phenolics and solvent extractables.

ii) Priority Pollutants

Monthly monitoring data for both conventional and priority pollutants will be used to establish the presence or absence of the pollutant. Any one pollutant found above the Ministry MDL in the databases available to the Ministry in a process effluent, combined effluent or boiler blowdown effluent stream triggered the assignment of the whole analytical test group for monthly monitoring.

In this way, the possibility of detecting similar compounds was selectively increased on the basis of at least one detection of an analytical test group member without the need to analyze for all of the other analytical test groups at a greater frequency for each effluent each month.

Knowledge of raw material usage, by-products, and products could also initiate monthly monitoring even if the parameters did not appear in the databases examined by the Ministry staff.

B) EVENT DISCHARGE EFFLUENT

The frequency of event discharges could vary from about once per week to twelve times per year.

Monitoring of event discharge effluent will provide an estimation of the impact of loadings from these discharges and also assess the efficiency of wastewater treatment systems.

Event discharges are required to be monitored during discharge at a minimum frequency of once per month. There are no event discharges at hydraulic generating stations.

Fossil-fuelled thermal generating stations are required to monitor event discharge effluent for the following group of parameters: pH, specific conductance, ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), total metals, iron, hydrides, hexavalent chromium, mercury, phenolics, solvent extractables and neutral chlorinated extractables.

Nuclear-powered thermal generating stations are required to monitor event discharge effluent for the following group of parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total suspended solids (TSS), volatile suspended solids (VSS), copper, zinc, iron, phenolics and solvent extractables.

The facilities associated with nuclear power generation are required to monitor event discharge effluent for the following group of parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total suspended solids (TSS), aluminum, copper, molybdenum, mercury, sulphide, PCB's, diethanolamine and solvent extractables.

C) BATCH DISCHARGE EFFLUENT

Batch discharge effluent results from batch discharges of the Radioactive Liquid Waste Management System Tanks at the nuclear-powered thermal generating stations and the Waste Treatment Centre at Chalk River Nuclear

Laboratories. There are no batch discharges at any other facilities in the EPG sector. The expected frequency of these discharges are about three per day, or one hundred per month per station.

Monitoring of batch discharge effluents will provide an estimation of the impact of loadings from these discharges.

Batch discharges are required to be monitored regularly.

Batch discharges are required to be monitored at nuclear-powered thermal generating stations for the following group of parameters: pH, specific conductance, ammonia plus ammonium, total Kjeldahl nitrogen, nitrate plus nitrite, TOC, DOC, total phosphorus, TSS, Total metals, hexavalent chromium, sulphide, halogenated volatiles, neutral chlorinated extractables, solvent extractables, PCB's, Iron, and chlorinated dibenzo-p-dioxins and dibenzofurans (at Pickering NGS only).

Batch discharges are required to be monitored at the Chalk River Nuclear Laboratories for the following parameters: pH, specific conductance, ammonia plus ammonium, nitrate plus nitrite, DOC, TOC, total phosphorus, TSS, Total metals, hexavalent chromium, mercury, phenolics, non-halogenated volatiles, solvent extractables and iron.

D) ONCE-THROUGH COOLING WATER (OTCW)

With the exception of hydraulic generating stations, each of the generating stations or associated facilities are required to monitor once-through cooling water on a monthly basis for the following core group of parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS) and solvent extractables. The average daily intake and once-through cooling water (outfall) temperature are also required to be monitored in order to determine the temperature rise across the stations.

Additionally, priority pollutants and other conventional parameters are required to be monitored in cases where a parameter is above the Ministry MDL in order to provide an indication of the potential contamination from the contributing process effluent and combined effluent streams.

Hydraulic generating stations are required to monitor once-through cooling water streams for the following parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids and solvent extractables. In addition, PCB's are required to be monitored because of the potential for contamination from station transformers.

E) STORM WATER

The purpose of monitoring storm water is to provide an estimate of the impact of loadings from these discharges on receiving watercourses in relation to process and combined effluent discharges, and to determine whether more intensive monitoring or corrective action may be required in the future.

The majority of the generating stations and associated facilities have no storm water segregation/treatment systems. The storm sewers discharge into receiving watercourses through culverts or drains, or into once-through cooling water streams.
Storm water is required to be monitored for at least one storm event per month or at such a frequency as to provide 12 data points in a year. Failure to monitor an effluent stream in a given month will require two samples to be collected in the next month. At least 2 of the 12 data points must be obtained in the winter or spring months during periods of thaw. This will provide some insight into the potential for contamination from runoff during the winter.

Storm water effluents at all generating stations and associated facilities are required to be monitored for the following group of core parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids and solvent extractables.

Other pollutants are required to be monitored in cases where a parameter is found above the Ministry MDL in the databases available to the Ministry. In cases where there was no data available, best professional judgement was used to reflect the potential for contamination from process areas or from developed areas of the station or facility.

Where similar developed areas of a station are being drained, representative storm water monitoring will be permitted as determined at the Initial Report stage of the program.

F) COAL PILE EFFLUENT

The purpose of monitoring coal pile effluent at the fossil-fuelled thermal generating stations is to provide an estimate of the impact of loadings from these discharges on receiving watercourses in relation to process effluent discharges, and to determine whether more intensive monitoring or corrective action may be required in the future. Coal pile effluent streams have been identified as having a significant potential impact because of the nature of the contaminants.

Coal pile effluent is generally collected and treated. In cases where treatment is available in a coal pile treatment system, the treatment system effluent is required to be monitored as an event discharge. Where treatment is provided by an ash transport system which combines the coal pile effluent with effluent from other processes, monitoring of effluent from the ash transport system will provide an indication of the potential impact of the coal pile effluent. The requirement to monitor before and after treatment reflects the fact that coal pile effluent is largely diluted in both types of treatment systems.

Coal pile effluent is required to be monitored for at least one event per month or at such a frequency as to provide 12 data points in a year. Failure to monitor an effluent stream in a given month will require two samples to be collected in the following month. At least 2 of the 12 data points must be obtained in the winter or spring months during periods of thaw. This will provide some insight into the potential for contamination from runoff during the winter.

Coal pile effluent streams are required to be monitored for the following group of parameters: pH, specific conductance, ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), total metals, iron, hydrides, hexavalent chromium, mercury, phenolics, solvent extractables and neutral chlorinated extractables.

Other pollutants are required to be monitored in cases where a parameter is found above the Ministry MDL in the databases available to the Ministry. In cases where no database is available, best professional judgement was used.

G) WASTE DISPOSAL SITE EFFLUENT

The purpose of monitoring waste disposal site effluent is to provide an estimate of the impact of loadings from these discharges on receiving watercourses in relation to process effluent and combined effluent discharges, and to determine whether more intensive monitoring or corrective action may be required in the future.

The majority of the generating stations and facilities have no waste disposal site effluent collection systems.

Waste disposal site effluent is required to be monitored at the time of discharge, on an event basis. There are no waste disposal sites at any of the fossil-fuelled or nuclear-powered thermal generating stations, or hydraulic generating stations to be monitored. Waste disposal site effluents at facilities associated with nuclear power generation are required to be monitored for the following parameters: pH, specific conductance, ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), phenolics and solvent extractables.

Other pollutants are required to be monitored in cases where a parameter is found above the Ministry MDL in the databases available to the Ministry. In cases where there was no data available, best professional judgement was used.

H) POTENTIALLY CONTAMINATED BUILDING EFFLUENT AND EQUIPMENT CLEANING EFFLUENT

Potentially contaminated building effluents are effluents originating from floor drains, equipment drains and trenches which discharge into sumps. Equipment cleaning effluents are generated infrequently from the cleaning of boilers, air preheaters and heat exchangers. These effluents are generally not collected in a collection system, but are discharged directly to once-through cooling water, yard drains or lagoons.

The purpose of monitoring these effluents is to provide an estimate of the impact of loadings from these discharges on receiving watercourses in relation to process effluent discharges, and to determine whether more intensive monitoring or corrective action may be required in the future.

Potentially contaminated building effluent and equipment cleaning effluent at all generating stations and associated facilities are required to monitor for the following core parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), copper, zinc, iron and solvent extractables.

Other pollutants are required to be monitored in cases where a parameter is found above the Ministry MDL in the databases available to the Ministry. In cases where there was no data available, best professional judgement was used.

I) EMERGENCY OVERFLOWS

Emergency overflows are process effluents which by-pass their intended destination because of unforeseen emergencies, or equipment outages, and are directed to a surface watercourse without any treatment.

The purpose of monitoring emergency overflows is to estimate the potential impact on the environment and to record the number of such occurrences for possible remedial action.

Emergency overflow effluent streams are required to be monitored for the following core group of parameters: pH, specific conductance, dissolved organic carbon (DOC), total organic carbon (TOC), ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, total phosphorus, total suspended solids (TSS), copper, zinc, iron and solvent extractables.

The specific rules for all effluent streams are summarized in Table 7 of Appendix 2.

XIV CHARACTERIZATION

Characterization is the quantitative determination of a number of conventional pollutants and all of the pollutants on the EPG Sector List using the analytical techniques specified in the General Effluent Monitoring Regulation. All of the generating stations in the EPG Sector are required to perform quarterly characterization analyses on each of their process effluent, batch discharge effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent streams. The characterization requirements include 15 conventional pollutants, 136 EPG Sector List pollutants and 5 sector-specific pollutants, all of which are shown in Table 3 of Appendix 2.

The primary purpose of characterization is to establish the presence or absence of pollutants in all of the EPG Sector process effluent, combined effluent, boiler blowdown effluent and batch discharge effluent streams. Characterization data and flow information may also be used to provide estimates of annual loadings of parameters for comparison among the MISA industrial sectors.

Characterization data may also indicate if a change of monitoring frequency may be required (in the future) for a given parameter. This may lead to more or less intensive monitoring of a given parameter from the EPG Sector List.

In order to determine the appropriate frequency for characterization monitoring, use was made of statistical analyses. The pre-regulation monitoring program produced up to three rounds of characterization data. The Ministry's inspection characterizations - one during the pre-regulation monitoring program period and two to be done within the regulation period will provide additional characterization data. Thus, a database of up to six characterizations will exist to augment the requirements under the monitoring regulation.

From the statistical data shown in Table 9 of Appendix 2, it is clear that for a given parameter that is present 50% of the time or greater in an effluent, the probability of finding the contaminant is very high whether twelve samples (99.9% probability) or four samples (93.7% probability) are taken.

The probability of detecting less frequently occurring parameters that are present 1% of the time is less than 12% whether two, seven, eleven, or twelve characterizations are carried out (see Table 9 in Appendix 2).

Parameters in analytical test group 24 (chlorinated dibenzo-p-dioxins and dibenzofurans) will also be required for quarterly characterization.

The characterization requirements in the monitoring regulation are augmented by open characterization analyses which are required quarterly on all of the process effluent, combined effluent, boiler blowdown effluent and batch discharge effluent streams.

XV OPEN CHARACTERIZATION

Open characterization will provide tentative identification of both organic compounds and inorganic elements that are not currently on the EPG Sector List. Use is made of gas chromatography/mass spectrometry (GC/MS) and inductively coupled plasma procedures or atomic emission spectroscopy to obtain the data.

Open characterization will be used to identify parameters in process effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent streams and will be used to provide candidate compounds for hazard assessment for potential addition to EMPPL. In this way, open characterization data, when combined with characterization data, will provide a more relevant parameter list for future monitoring and control.

The relatively modest incremental cost of running open characterization analyses in conjunction with characterization analyses, and the large return in terms of data produced, is a strong justification for requiring open characterization in the monitoring regulation.

The detection limit achievable for open characterization of organic compounds will depend upon the sample size, concentration factor, efficiency of extraction from the original matrix, GC/MS conditions, overall complexity of the sample, degree of chromatographic resolution from other co-extractives and the mass spectral characteristics of specific compounds. In some cases, compounds extracted from a 1.0 L sample may be identifiable at concentrations as low as 1 - 5 parts per billion (ppb). In other cases, identification may require concentrations of components to be 50 ppb or greater. In the majority of the cases, 10 - 20 ppb concentrations should be detectable.

XVI TOXICITY TESTING

Biological testing of effluents is required along with chemical testing in order to provide an indication of the interaction that may occur between the various components of an effluent stream and of the potential impact on the receiving watercourse.

Two different types of toxicity tests are required to be conducted: a 96-hour Rainbow Trout acute lethality toxicity test (fish toxicity test) and a Daphnia magna acute lethality toxicity test. These tests are full series dilution tests and are conducted according to protocols available in documents from the Ministry (10,11).

The Ministry has reviewed results from fish toxicity and Daphnia magna acute lethality toxicity tests conducted on the same effluent samples. It was concluded that rainbow trout and Daphnia magna differ in their sensitivity to some effluents and therefore the use of both tests will provide valuable information on the toxicity of the effluents.

Both toxicity tests are required to be performed on all process effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent streams at a station on a monthly basis. For all effluent streams other than boiler blowdown effluent, for fish toxicity tests only, in the event that 3 consecutive monthly tests result in mortality for no more than two out of ten fish, the subsequent monthly tests may be performed on undiluted effluent on a pass/fail basis. If more than two fish die in any pass/fail test, full dilution series tests are again required. The allowance to use a pass/fail test again is permitted where a further three tests result in mortality for no more than two out of ten fish. The Daphnia magna acute lethality toxicity test must be conducted monthly using the full series dilutions at all times.

Quarterly toxicity testing is required for all once-through cooling water streams. The large dilution of process effluents with cooling water may mask any contaminants of concern. Therefore, effluent toxicity testing may be the most appropriate means to assess the impact of these effluent streams.

Process effluent, combined effluent, event discharge effluent, boiler blowdown effluent and batch discharge effluent streams will be tested without pH adjustment. While the undiluted effluent may be predictably lethal primarily due to pH alone, the series of dilutions required under the tests will isolate the pH effect and allow the calculation of an LC50 value.

XVII QUALITY ASSURANCE / QUALITY CONTROL

Quality assurance and quality control (QA/QC) encompasses all of the procedures undertaken to ensure that data produced are generated within known probability limits of accuracy and precision.

Quality assurance is the overall verification program which provides producers and users of data the assurance that predefined standards of quality at predetermined levels of confidence are met. Quality assurance is comprised of two elements: quality control and quality assessment.

Quality control is the overall system of guidelines, procedures and practices which are designed to regulate and control the quality of products or services with regards to previously established performance criteria and standards.

Quality assessment is the overall system of activities which ensure that quality control is being performed effectively. This is carried out immediately following quality control and involves evaluation and auditing of quality control data to ensure the success of the quality control program.

QA/QC is one of the most important aspects of the MISA monitoring regulations. The QA/QC program includes many small but essential activities ranging from: proving the cleanliness of sample bottles and using proper sampling equipment, containers and preservatives; to instrument calibration, validation of authenticity of standards, inclusion of blanks, spikes and controls in analytical runs; to documenting performance and participation in external round-robins; and, to defining the proper method for reporting a final data number. Omission of one of these activities can lead to unreliable data resulting in improper conclusions and perhaps inappropriate actions.

The financial stakes riding on the monitoring regulation data are too high to compromise the generated data with inadequate QA/QC. The QA/QC program therefore requires both analytical QA/QC and field QA/QC. The analytical QA/QC is to be undertaken by the laboratories performing the analyses for all parameters to be monitored under the regulation. The field QA/QC is required on one process effluent or combined effluent stream at each station at monthly and quarterly frequencies for each of the parameters to be monitored in that stream. Each of the QA/QC samples will provide different information on the quality of the samples and analytical procedures used.

XVIII FLOW MEASUREMENT

Accurate flow measurements are essential for the determination of contaminant loadings to surface watercourses. As process effluent and batch discharge effluent streams have the greatest potential for impacting the environment, and as such have the most stringent monitoring requirements, flow measurement requirements for process effluent and batch discharge streams are the most stringent. An accuracy of ±7% is required for flow measurement of all process effluent and batch discharge effluent streams under the monitoring regulation. The process or batch discharge flow measurement accuracy requirement is broken down to ±5% of the actual flow for the primary flow measuring device and ±2% of full scale flow for the secondary flow measuring device.

The accuracy of the flow measuring system will be ±9% of the actual flow at one half of the design flow and ±13% of the actual flow at one quarter of the design flow. Therefore, the flow of process effluent streams will be measured from ±7% or ±13% of the actual flow for the design range of the measuring system.

An existing flow measuring system installed on a process effluent stream should meet the above requirements unless flow calibration indicates that the device is not capable of achieving the required flow measurement accuracy. In these cases, an accuracy of ±15% of the actual flow is permitted.

Since boiler blowdown is considered to be a process effluent stream for the purposes of the General Regulation, a flow measurement accuracy of ±7% is also required. However, two phase flow in discharge lines from the boiler may result in inaccurate flow measurements. Therefore, an alternate flow measurement method based on demineralized water makeup and/or calculation from makeup tank level difference is acceptable.

Since batch discharges from the RLWMS Tanks are considered to be process effluent for the purposes of the General Regulation, a flow measurement accuracy of ±7% is required. Since flow can be calculated accurately from the geometry of the tank and level difference of effluent discharged, such an approach is acceptable.

All other effluent streams, including combined effluent, event discharge effluent and once-through cooling water require a flow measurement accuracy of ±20% of the actual flow, which allows for the use of flow estimation using water balance calculations and pumping rates.

XIX ECONOMIC IMPLICATIONS OF THE MONITORING REGULATION

The physical and economic dimensions of the Electric Power Generation Sector have been documented in the report, "Economic and Financial Profile of the Ontario Electric Power Generation Sector" (12). This report concludes that the financial health of Ontario Hydro, which operates virtually all of the electric power generation facilities in Ontario, is generally strong. The only concern that may be derived from the agency's financial statements is the very large, long term debt which Ontario Hydro has incurred to build nuclear power plants. Much of this debt is with foreign lenders as well. Medium and long term prospects for Ontario Hydro depend on the performance of the economy in general.

On the other hand, Atomic Energy of Canada Ltd. (AECL) has experienced decreased total revenues and an increase in after-tax profit from 1983 through 1987. While, AECL's financial position remains profitable, the Corporation is presently undergoing restructuring which involves "privatization" of some of its operations.

A second report, entitled "Monitoring Cost Estimates and their Implications for Direct Dischargers in the Electric Power Generation Sector.", June 1989 (13), will present estimates and implications of the incremental costs to Ontario Hydro and AECL because of the monitoring regulation requirements.

Cost estimates for many of the monitoring activities have only recently been submitted by Ontario Hydro and are subject to MOE review and assessment. Ministry staff have generated estimates of routine analysis, characterization and toxicity test costs based on commercial laboratory analysis prices in order to be consistent and comparable with other firms and sectors. Since Ontario Hydro will be carrying out many of the tests themselves, the actual costs for the analyses may be somewhat lower.

The cost estimates are based on the site-specific monitoring schedules for the 27 stations and associated facilities, of which 24 are owned by Ontario Hydro and three facilities are owned by AECL, that are subject to the Regulation.

Because of uncertainties and contingencies, both range and point estimates of costs have been produced. A point estimate is a single-valued estimate of the relevant costs based on specific assumptions and computational procedures. A factor of ± 15% has been used to estimate the potential range of costs.

Capital and operating cost estimates have been generated for the following monitoring functions:

- Sampling and Sample Transportation
- Flow Measurement
- Chemical Analysis
    - Routine
    - Characterization
- Toxicity Testing
- Reporting and Supervision

For Ontario Hydro, tentative point estimates of the total incremental monitoring costs are summarized in Table 1, below. These estimates are subject to further review and revision as additional information is forthcoming.

Table 1

Monitoring Function	Operating & Maintenance ($, million)	Capital
Sampling	1.8	2.8
Sample Transportation	0.2	---
Flow Measurement	0.2	1.2
Analytical		
Routine	3.9*	1.5
Characterization	0.9*	---
Toxicity Testing	0.5*	---
Reporting	0.3	0.1
Supervision	0.2**	---
TOTAL	**8.0**	**5.6**

* These costs reflect commercial laboratory rates.
**Other sectors have not identified these costs separately

Using an uncertainty and contingency factor of ± 15%, the total operating costs to Ontario Hydro could range from $ 6.8 million to $ 9.2 million while capital expenditure could vary from $ 4.8 million to $ 6.4 million. Using the point estimates shown in Table 1, the average total operating and capital cost per station is about $ 570 000.

Point estimates of the monitoring costs for AECL are summarized in Table 2., below.

Table 2

Monitoring Function	Operating & Maintenance ($)	Capital ($)
Sampling	171 000	250 000
Sample Transportation	8 000	-------
Flow Measurement	5 000	120 000
Analytical		
Routine	293 000*	-------
Characterization	47 000*	-------
Toxicity Testing	24 000*	-------
Reporting	65 000	60 000
Supervision	30 000**	
TOTAL	**643 000**	**430 000**

* These costs reflect commercial laboratory rates.
**Other sectors have not identified these costs separately

Using a range of ± 15%, total incremental capital and operating costs could vary from $ 935 000 to $ 1 265 000. These estimates will also likely be revised somewhat.

Total incremental monitoring costs for the sector are expected to range from $ 12.4 million to 16.8 million. The average point estimate of total costs per station or associated facility will range from $ 477 000 to $ 646 000.

The estimated capital costs for the sector will likely range from $ 5.2 million to $ 7.0 million. Ontario Hydro accounts for over 93% of the total estimated capital costs. Operating costs are estimated to range from $ 7.2 million to $ 9.8 million.

Ontario Hydro will need to raise additional revenue to cover the monitoring costs. Depending on whether or not total capital costs are depreciated, Ontario Hydro will require between $ 10 million and $ 14 million in extra revenue during the 12 month monitoring period of the Regulation. Assuming that Ontario Hydro is able to pass on total incremental operating costs and a capitalized portion of the capital cost as higher electricity rates, actual electricity rates could increase by as much as 0.2%. Ontario Hydro has not identified these costs as a problem.

Based on previous financial results, the incremental costs of monitoring are not expected to have any adverse financial effects on Ontario Hydro or AECL.

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(11) Ontario Ministry of the Environment, "Daphnia magna Acute Lethality Toxicity Test", April 1988.

(12) Ontario Ministry of the Environment, "Economic Profile of the Electric Power Generation Industry", 1989.

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APPENDIX 1

ELECTRIC POWER GENERATION SECTOR

SITE DATA

Individual site descriptions of Electric Power Generation Sector companies are provided in this section. Information such as the site location, type, generating capacity, water flowrates, number of employees, and effluent treatment are provided.

A legend of the abbreviations used in this section to identify various effluent streams is presented below:

Legend:

BBE - boiler blowdown effluent
BDE - batch discharge effluent
CE - combined effluent
CPE - coal pile effluent
ECE - equipment cleaning effluent
EDE - event discharge effluent
EO - emergency overflow effluent
OTCW - once-through cooling water
P - process effluent
PCBE - potentially-contaminated building effluent
SW - storm water
WD - waste disposal site effluent

Hydraulic Generating Stations:

Site: **Aguasabon GS**

Location: Aguasabon River, near Terrace Bay

History: built in 1948

Type: 2 units, large vertical

Capacity: 44 MW

Employees: none (remote operation)

Wastewater Treatment:

None

OTCW: bearing cooling water
PCBE: powerhouse sumps
SW: unit transformer drainage
switchyard drainage

Site: **Arnprior GS**

Location: Madawaska River, near Arnprior

History: completed in 1976

Type: 2 units, large vertical

Capacity: 80 MW

Employees: none (remote operation)

Wastewater Treatment:

None

OTCW: bearing cooling water
PCBE: powerhouse sumps
SW: unit transformer drainage
switchyard drainage

Site: **Sir Adam Beck No. 2 GS**

Location: Niagara River, south of Queenston

History: first unit placed in service 1954, last unit in 1958

Type: 16 units, large vertical

Capacity: 1,328 MW

Employees: 80

Wastewater Treatment:

None

OTCW: bearing cooling water
transformer cooling water
PCBE: powerhouse sumps
SW: unit transformer drainage
switchyard drainage

Site: **Decew No. 2 GS**

Location: Old Welland Ship Canal, in St. Catharines

History: completed in 1943

Type: 2 units, large vertical

Capacity: 144 MW

Employees: none (remote operation)

Wastewater Treatment:

None

OTCW: bearing cooling water
transformer cooling water
PCBE: powerhouse sumps
SW: unit transformer drainage
switchyard drainage

Site: **Pine Portage GS**

Location: Nipigon River, at outlet of Lake Nipigon

History: first unit in service 1950, last unit in 1954

Type: 4 units, large vertical

Capacity: 132 MW

Employees: none (remote operation)

Wastewater Treatment:

None

OTCW: bearing cooling water
PCBE: powerhouse sumps
SW: unit transformer / switchyard drainage

Site: **Silver Falls GS**

Location: Kamanistikwia River, Thunder Bay

History: completed in 1959

Type: 1 unit, large vertical

Capacity: 48 MW

Employees: none (remote operation)

Wastewater Treatment:

None

OTCW: bearing cooling water
PCBE: powerhouse sumps
SW: unit transformer drainage
switchyard drainage

Fossil-Fuelled Thermal Generating Stations:

Site:	**Atikokan TGS**
Location:	between Moose Lake and Snow Lake, 16 km north of Atikokan
History:	placed in service 1985
Type:	1 unit, coal (1986 tonnage) western Canadian lignite - 250,000t
Capacity:	200 MW
Flowrate:	condenser cooling water 5.3×10^5 m^3/d avg. service water 6.2×10^4 m^3/d avg.
Employees:	55

Wastewater Treatment:

None

BBE:	boiler blowdown
CPE:	coal pile effluent
EO:	ash transport water system (ATWS) emergency overflow - to clean floor drains
OTCW:	condenser cooling water (CCW)
P:	neutralizing sump effluent - to clean floor drains
PCBE:	clean floor drains, crusher and dumper house sumps, CCW pumphouse drains
SW:	yard drains, unit transformer area drains roof drains - to clean floor drains

Primary

ECE:	air preheater washes, boiler internal washdowns - to ATWS boiler acid cleaning wastes - neutralization
P:	ATWS (furnace ash, pyrites) - clarification / filtration (in treatment plant) oil contaminated floor drains, transformer fire pits - oily water separation water treatment plant wastes - neutralization sanitary sewage - primary lagoons
PCBE:	solids contaminated floor drains - to ATWS
SW:	ash storage area - to solids contaminated floor drains

Secondary

n/a

Site: **Lakeview TGS**

Location: Lake Ontario, in Mississauga (west of Toronto)

History: first unit commissioned in 1961, last unit in 1968

Type: 8 units, coal (1986 tonnage)
medium sulphur U.S. bituminous - 787,000t

Capacity: 2,400 MW

Flowrate: condenser cooling water, 2.6×10^6 m^3/d avg.
service water, 3.7×10^5 m^3/d max.

Employees: 500

Wastewater Treatment:

None

BBE: boiler blowdown
EO: coal pile effluent emergency overflow - to intake channel
ash transport water system (ATWS) emergency overflow - to outfall
OTCW: condenser cooling water (CCW)
PCBE: powerhouse (boilerhouse) floor drains - to CCW
SW: unit transformer area drains - to north yard drains
north and south yard drains, switchyard drainage

Primary

ECE: boiler acid wash effluent - to coal pile treatment system
air preheater wash effluent - to ATWS
EDE: coal pile / ash storage site effluent - clarification / neutralization (in coal pile drainage pond)
P: ATWS (furnace ash, pyrites) - clarification / filtration (in ash settling pond and filter units)
water treatment plant wastes - neutralization
neutralizing sump effluent - to ATWS
powerhouse (turbine hall) floor drains, condenser pit sump effluent - oily water separation
CCW pumphouse floor drains - oily water separation
SW: south yard drains units 5 & 6 (flyash silo area) - to ATWS

Secondary

n/a (sanitary sewage to municipal system)

Site: **Lambton TGS**

Location: St. Clair River, south of Courtright

History: first unit put in service 1969, last unit in 1970

Type: 4 units, coal (1986 tonnage)
regular sulphur U.S. bituminous - 2.2 x 10^6t
low sulphur U.S. bituminous - 315,000t

Capacity: 2,000 MW

Flowrate: condenser cooling water, 2.65 x 10^6 m^3/d avg.
service water, 3.5 x 10^5 m^3/d avg.

Employees: 350

Wastewater Treatment:

None

BBE:	boiler blowdown
CPE:	coal pile effluent - to Bowman's Pit
EO:	ash transport water system (ATWS) emergency overflow - to south yard drains
OTCW:	condenser cooling water (CCW) service water open cooling system discharges - to powerhouse floor drains main transformer cooling water - to yard drains
PCBE:	powerhouse floor drains (boilerhouse and turbine hall) - north drains to river, south drains to CCW CCW pumphouse floor drains
SW:	north and south yard drains roof drains, unit transformer area drains, switchyard drainage - to yard drains

Primary

ECE:	boiler acid washes - neutralization (in acid pond) air preheater washes, sootblowing - to ATWS
EDE:	coal pile effluent from Bowman's Pit - clarification / neutralization (in Lake Lambton)
P:	ATWS (furnace ash, pyrites, economizer ash) - clarification / filtration water treatment plant wastes - neutralization neutralizing sump wastes - to ATWS sanitary sewage - primary lagoons
SW:	ash storage site surface runoff - clarification / neutralization (in Lake Lambton)

Secondary

n/a

Site:	**Lennox TGS**
Location:	Lake Ontario, southwest of Kingston
History:	first unit commissioned in 1976, last unit in 1977 units 3,4 mothballed in 1980, units 1,2 in 1982 units 1,2 recommissioned in 1987, unit 4 in 1988 unit 3 to be recommissioned in 1989
Type:	4 units, oil (low-sulphur residual or crude)
Capacity:	2,240 MW
Flowrate:	condenser cooling water, 3 x 10^5 m^3/d per unit, max. service water, 4.9 x 10^4 m^3/d max.
Employees:	55

Wastewater Treatment:

None

BBE:	boiler blowdown
OTCW:	condenser cooling water (CCW) main transformer cooling water - to yard drains
PCBE:	powerhouse floor drains and utility drains - to CCW via non-contaminated sumps CCW pumphouse drains - to CCW
SW:	east and west yard drains switchyard drainage - to east yard drain precipitator roof drains - to yard drains

Primary

ECE:	boiler acid washes and chemical cleaning - neutralization (in acid pond) unit preheater wash effluent - neutralization / clarification (2 lagoons)
P:	powerhouse oil contaminated sumps, tank farm contaminated sumps - oily water separation water treatment plant wastes - neutralization / clarification neutralizing sump wastes - discharge to east yard drain sanitary sewage - 2 lagoons
SW:	tank farm and yard drainage (potentially oily water) - oily water separation

Secondary

P:	sanitary sewage - secondary lagoon

Site: **Nanticoke TGS**

Location: Lake Erie, east of Port Dover

History: station completed in 1978

Type: 4 units, coal (blended, 1986 tonnage)
western Canadian bituminous - 1.66×10^6t
regular sulphur U.S. bituminous - 3.04×10^6t

Capacity: 4,096 MW

Flowrate: condenser cooling water, 7.75×10^6 m^3/d max.
service water, 1.57×10^6 m^3/d max.

Employees: 550

Wastewater Treatment:

None

BBE: boiler blowdown
EO: overflows from boiler and air heater cleaning - to CCW
OTCW: condenser cooling water (CCW)
equipment cooling water - to floor drains
P: ash transport water system (ATWS) line drainage - to north yard drains
PCBE: powerhouse floor drains (boilerhouse and turbine hall) - to CCW via service water sump
CCW pumphouse floor drains - to forebay
SW: yard drains, north yard drains - to lake

Primary

CPE: coal pile effluent - to ash lagoon via sump
ECE: air preheater and boiler wash wastes, boiler acid wash waste - to ash lagoon
P: water treatment plant wastes - neutralization
neutralizing sump wastes - to ash lagoon
ATWS (furnace ash, pyrites and flyash) - sedimentation / neutralization / precipitation / adsorption / evaporation (in ash lagoon)
sanitary sewage - lagoon
sewage lagoon effluent - to coal pile effluent sump
WD: ash storage area effluent and leachate - to ash lagoon

Secondary

n/a

Site: **Thunder Bay TGS**

Location: Lake Superior and Mission River, in Thunder Bay

History:
station completed in 1963, unit 1 mothballed immediately
unit 1 placed in service in 1966
construction started on units 2 and 3 in 1975
unit 2 put in service in 1981, unit 3 in 1982
unit 1 mothballed in 1984

Type: 2 units, coal (1986 tonnage)
western Canadian lignite or bituminous
- 844,000t

Capacity: 300 MW (one 100 MW unit mothballed)

Flowrate: condenser cooling water, 1.1×10^6 m^3/d max.
service water, 7.5×10^5 m^3/d max.

Employees: 350

Wastewater Treatment:

None

BBE: boiler blowdown - to intake channel
EO: ash transport water system (ATWS) emergency overflow
OTCW: condenser cooling water (CCW)
P: neutralizing sump wastes, brine saturator overflow
PCBE: stores / maintenance area drains, roof drains / condenser pit sumps, trash rack effluent
SW: clean yard drains - to intake channel

Primary

CPE: coal pile effluent - to ATWS via pond
ECE: air preheater wash effluent, boiler internal washdowns, boiler acid cleaning wastes - to ATWS
P water treatment plant wastes - neutralization
ATWS (furnace ash and pyrites) - clarification / filtration
flyash removal system (blowdown) effluent - to ATWS
PCBE: boilerhouse drains, crusher house drains - to ATWS
turbine hall floor drains, transformer fire pit drainage - oily water separation
equipment garage drains, maintenance garage drains, refuelling area drains - oily water separation
combustion turbine unit drains - oil trap
WD: ash disposal site effluent - to ATWS

Secondary

P: sanitary sewage - conventional activated sludge plant

Mothballed Thermal Generating Stations:

Site: **R.L. Hearn TGS**

Location: Lake Ontario, in Toronto

History:
first coal-burning unit placed in service in 1951, last unit in 1961
converted to natural gas from Sept. 1971 to Mar. 1972
station mothballed in 1983
units 6 & 7 presently operated as synchronous condensers

Type: 8 units,
4 units (200 MW each) - coal (U.S. bituminous) or natural gas
4 units (100 MW each) - natural gas

Capacity: 1,200 MW (mothballed)

Flowrate:
condenser cooling water, 5.44×10^5 m^3/d
service water, 5,440 m^3/d

Employees: 6

Wastewater Treatment:

None

OTCW:
condenser cooling water (CCW)
equipment cooling water - to floor drains

PCBE:
powerhouse floor drains - to discharge channel via sumps
CCW pumphouse drains, trash rack effluent - to ship turning channel

SW:
switchyard drainage, yard drains, roof drains, reclaimed coal storage area, catch basins 6, 7 & 8

Primary

n/a

Secondary

n/a (sanitary sewage to municipal system)

Site: **J.C. Keith TGS**

Location: Detroit River, in Windsor

History: first unit placed in service in 1952, last unit in 1953
station mothballed in 1984
switchyard still operational

Type: 4 units, coal (U.S. bituminous)

Capacity: 264 MW

Flowrate: condenser cooling water n/a
service water n/a

Employees: none

Wastewater Treatment:

None

SW: switchyard drainage
former coal storage area, yard drainage - to river via ash lagoon and weirs (primary and secondary)

Primary

n/a

Secondary

n/a

Nuclear-Powered Thermal Generating Stations:

Site: **Bruce NGS-A/B**

Location: Lake Huron, at Tiverton

History: NGS-A, first unit put in service 1977, last unit in 1979
NGS-B, first unit put in service 1984, last in 1987

Type: 4 units each, uranium oxide fuelled (natural)

Capacity: NGS-A, 3,056 MW
NGS-B, 3,345 MW

Flowrate: NGS-A, condenser cooling water, 13.4×10^6 m^3/d max.
service water, 1.56×10^6 m^3/d max.

NGS-B, condenser cooling water, 17.2×10^6 m^3/d max.
service water, 1.97×10^6 m^3/d max.

Employees: NGS-A, 780 / NGS-B, 730

Wastewater Treatment:

None

BBE: boiler blowdown
BDE: Radioactive Liquid Waste Management System (RLWMS) low activity effluents - to lake
OTCW: condenser cooling water (CCW)
P: NGS-A filter and carbon filter backwash - to forebay
PCBE: inactive drainage (building, utility drains) - to CCW duct
active drainage (building, utility drains) - to RLWMS
Emergency Coolant Injection (ECI) System Accumulator Building effluent - to yard drains
SW: yard drains, switchyard drains, inactive drainage (roof drains)

Primary

BDE: RLWMS high activity effluents - filtration
EDE: oily water from sump - to RLWMS (after being drummed, transferred, and allowed to separate in holding tanks)
P: water treatment plant wastes - neutralization

Secondary

n/a (sanitary sewage to BNPD Sewage Processing Plant (SPP))

Site: **Darlington NGS**

Location: Lake Ontario, at Bowmanville

History: 1st unit not yet placed in service
station expected to be completed in 1992

Type: 4 units, uranium oxide fuel (natural)

Capacity: (future) 3,524 MW

Flowrate: condenser cooling water, 10.9 x 10^6 m^3/d max. (future)
service water, 2.2 x 10^6 m^3/d max. (future)

Employees: (future) ~850

Wastewater Treatment:

None

BBE: boiler blowdown
BDE: Radioactive Liquid Waste Management System (RLWMS) low activity effluents - to lake
OTCW: condenser cooling water (CCW)
PCBE: inactive drainage (building, utility drains) - to CCW duct
active drainage (building, utility drains) - to RLWMS
active effluents from Tritium Removal Facility - to RLWMS
Emergency Coolant Injection (ECI) System effluent - to RLWMS
CCW pumphouse (screenhouse) floor drains, water treatment building floor drains - to forebay
SW: yard drains, switchyard drains, inactive drainage (roof drains)

Primary

BDE: RLWMS high activity effluents - filtration
EDE: potentially oily sumps (building, switchyard) - oily water separation (in holding tanks)
P: water treatment plant wastes - neutralization
sanitary sewage - equalization / sedimentation / chlorination

Secondary

P: sanitary sewage - rotating biological contactor

Site: **Pickering NGS-A/B**

Location: Lake Ontario, at Pickering

History: NGS-A, 1st unit placed in service in 1971, 4th unit in service 1973
NGS-B, 1st unit in service in 1983, 4th unit in 1985

Type: 4 units each, uranium oxide fuel (natural)

Capacity: NGS-A 2,060 MW
NGS-B 2,064 MW

Flowrate: NGS-A, condenser cooling water, 9.3 x 10^6 m^3/d max.
service water, 1.3 x 10^6 m^3/d max.

NGS-B, condenser cooling water, 10.0 x 10^6 m^3/d max.
service water, 1.3 x 10^6 m^3/d max.

Employees: 1,635

Wastewater Treatment:

None

BBE: boiler blowdown
BDE: Radioactive Liquid Waste Management System (RLWMS) low activity effluents - to lake
OTCW: condenser cooling water (CCW)
auxiliary irradiated fuel bay (AIFB) service water - to yard drains
Sulzer A/B (heavy water upgrading plants) service water - to yard drains
Upgrading Plant Pickering (UPP) service water - to NGS-A outfall
PCBE: inactive drainage (building, utility drains) - to CCW duct
Emergency Coolant Injection (ECI) System (tunnel only) - to yard drains
active drainage (building, utility drains, laundry) - to RLWMS
SW: yard drains, switchyard drains, inactive drainage (roof drains)

Primary

BDE: RLWMS high activity effluent - filtration
P: water treatment plant wastes - neutralization

Secondary

n/a (sanitary sewage to municipal system)

Associated Facilities:

Site: **Bruce Heavy Water Plants**

Location: Lake Huron, at Tiverton

History:
BHWP "A" put in service in 1973, shut down in 1984
BHWP "B" put in service 1981
BHWP "C" construction cancelled in 1976
BHWP "D" uncommissioned and mothballed in 1979
BHWP Common Services (CS)

Type:
separation with H_2S (Water / H_2S Dual-Temperature Process), countercurrent contact
vacuum distillation

Capacity: ~800 tonnes/y

Flowrate:
process water, 1.7×10^6 m^3/d avg.
cooling water, 1.2×10^6 m^3/d max.

Employees: 450

Wastewater Treatment:

None

OTCW: BHWP "B" and CS cooling water (CW) systems - to lake
bearing water for pumps - to forebay

PCBE: noncontaminated drainage (including: degasser hotwell drainage, condensate blowdown drum, filter backwash water) - to lake via discharge channel

P: process effluent (from enriching unit effluent strippers) - to lake (or to lake via process lagoon)

SW: BHWP "A" - to floodplain / BNPD-S combined outfall / Douglas Point outfall

Primary

EDE: process drain intermittent stripper effluent, process effluent (from enriching unit effluent strippers) - agitation / aeration / degassing (process lagoon)

SW: BHWP "B", "C", "D" and part of CS yard drainage - sedimentation (in surface drainage lagoon)

Secondary

n/a (domestic water/sanitary sewage - to BNPD Sewage Processing Plant)

Site: **Bruce Nuclear Power Development-Services (BNPD-S)**

Location: Lake Huron, at Tiverton

History: some facilities originally for support of Heavy Water Plants

Type: Associated Services for Bruce Nuclear Power Development complex

1) steam supply (Bruce Bulk Steam System - BBSS), comprised of:

   1) Condensate Plant;
   2) Steam Transformer Plant "A" (STP-A);
   3) Steam Transformer Plant "O" (STP-O); and,
   4) Bruce Steam Plant (BSP)

2) radioactive waste storage (Bruce Nuclear Waste Storage Site)

3) sewage treatment plant (BNPD Sewage Processing Plant - SPP)

Employees: 1,000

Wastewater Treatment:

None

BBE: blowdown (BSP, Condensate Plant) - to Douglas Point outfall
blowdown (STP-A) - to Bruce NGS-A intake channel
P: Neutralization Tank discharge - to Douglas Point outfall
water treatment plant (WTP) filter backwash effluents - to Douglas Point outfall
Waste Volume Reduction Facility (WVRF) active sump low activity effluent (surface/subsurface drainage) - to lake
PCBE: building floor drains, equipment drains, sample drains, service water drains, pressure relief valve drains (reboiler, steam transformer)
oil contaminated drains/sumps - (oil traps)
standby power facility fuel oil storage tank dyke sumps, fuel unloading area catch basins - (oil traps)
SW: yard drains, transformer area drains, roof drains - to site drainage system
WD: Radioactive Solid Waste Storage Site (surface and subsurface drainage) - to site drainage system
BNPD landfill site - runoff to site drainage system

Primary

ECE:	BSP air preheater wash effluents, boiler cleaning acid wastes - neutralization / sedimentation (in chemical waste pond)
P:	Condensate Plant WTP regeneration effluent - neutralization (in Neutralization Tank) WVRF high activity effluent - trucked to Bruce NGS-A for treatment
PCBE:	Central Maintenance Facility active drainage system - filtration (then trucked to Bruce NGS-A)

Secondary

P:	sanitary sewage - conventional activated sludge plant (Bruce SPP)

Site: **Darlington NGS - Construction**

Location: Lake Ontario, at Bowmanville

History: 1st unit not yet in service
station expected to be completed in 1992

Type: (future) 4 units, uranium oxide fuel (natural)

Capacity: (future) 3,524 MW

Employees: 7,000 peak

Wastewater Treatment:

None

BBE: blowdown tanks (construction boilerhouse) - to boilerhouse drains
ECE: utility washdown effluent - to boilerhouse drains
P: water treatment plant regeneration wastes - to boilerhouse drains
PCBE: construction boilerhouse drains - to site storm drainage system
SW: yard drains (storm drains) - to lake

Primary

ECE: pipe cleaning shop effluents - to sanitary sewage system
P: sanitary sewage - equalization / sedimentation / chlorination
WD: construction waste disposal site - sedimentation (in pond)

Secondary

P: sanitary sewage - rotating biological contactor

Commissioning Waste Streams

Wastewater Treatment:

None

ECE: boiler and piping systems cleaning effluents, wet layup storage effluents - to condenser cooling water (CCW) discharge (when CCW flow above minimum required)

P: commissioning waste lagoon effluent - to site drainage system

Primary

ECE: boiler and piping systems cleaning effluents, wet layup storage effluents - to waste lagoon (when insufficient CCW flow)

P: water treatment plant regeneration wastes - neutralization
hydrostatic testing effluents - to waste lagoon
condenser leak testing effluents - to waste lagoon
commissioning waste lagoon - sedimenation

Secondary

n/a

Atomic Energy of Canada Limited (AECL)

Associated Facilities:

Site: **Chalk River Nuclear Laboratories**

Location: Ottawa River, near Chalk River

History: established in 1945

Type: 2 reactors, uranium-aluminum alloy fuel

facilities present:
- research reactors;
- research laboratories and support facilities;
- isotope production facilities;
- heavy-water upgrading plant;
- waste management areas.

Capacity: NRU - 135 MW, NRX - 42 MW (thermal)

Flowrate: 125,000 m^3/d

Employees: 1,900

Wastewater Treatment:

None

BDE: Waste Treatment Centre - to Perch Creek (Perch Creek Basin)
CE: powerhouse combined drain
OTCW: reactor cooling water (process sewer)
P: boiler blowdown
active effluents - to Liquid Dispersal Area
SW: storm sewers, 01, 03, 04, 05
WD: Waste Management Areas C, F , old chemical/solvent disposal - to Duke Stream (Maskinonge Lake Basin)
Waste Management Areas A, B, D, Liquid Dispersal Area
inactive landfill (stream 02)

Primary

BDE: (future) active effluents - to Waste Treatment Centre
Waste Treatment Centre - microfiltration / reverse osmosis
P: sanitary sewage - equalization / chlorination

Secondary

P: n/a

Site:	**Douglas Point Waste Management Facility**
Location:	Lake Huron, at Tiverton
History:	construction began in 1960 unit began service in 1967 station shut down and decommissioning started in 1984 partial decommissioning completed in 1988 station to be maintained in a storage mode for the next 40 years
Type:	partially decommissioned nuclear generating station
Capacity:	n/a (formerly 200MW)
Employees:	6

Wastewater Treatment:

None

ECE:	Decontamination Centre active drainage - to active liquid storage tanks (ALST) ALST low activity effluent - to lake
OTCW:	instrument air compressor cooling water - to turbine hall sump
PCBE:	turbine hall floor drains - to turbine hall sump turbine hall sump - to Douglas Point Outfall
SW:	reactor building groundwater sump, Spent Fuel Bay groundwater sump - to Douglas Point outfall site drainage system - to lake

Primary

ECE:	ALST high activity effluent - trucked to Bruce NGS-B for treatment
P:	water treatment plant wastes - to BNPD Sewage Processing Plant sanitary sewage - to sewage lagoon

Secondary

n/a	(water treatment plant wastes - to BNPD Sewage Processing Plant)

Site: **Nuclear Power Demonstration (NPD) Waste Management Facility**

Location: Ottawa River, at Rolphton

History: site began service in 1962
station shut down and decommissioning started in 1987
partial decommissioning to be completed in 1988
station to be maintained in a long-term storage state

Type: partially decommissioned nuclear power demonstration site

Capacity: n/a (formerly 25MW)

Employees: None (remote monitoring)

Wastewater Treatment:

None

PCBE: inactive drainage (building drains) - to river via condenser cooling water (CCW) duct
active drainage - to wells area sump
wells area sump low activity effluent - to river via inactive floor drains

SW: yard drain (ring drain)
roof drains - to CCW duct

Primary

PCBE: wells area sump high activity effluent - trucked to Chalk River Nuclear Laboratories

Secondary

n/a

APPENDIX 2

TABLE 1

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES FOR THE ELECTRIC POWER GENERATION SECTOR

MAJOR GROUP CLASS	SIC	NAME
49	4911	ATIKOKAN TGS, OH, ATIKOKAN
		J.C.KEITH TGS, OH, WINDSOR
		LAKEVIEW TGS, OH, MISSISSAUGA
		LAMBTON TGS, OH, COURTRIGHT
		LENNOX TGS,OH,S.FREDERICKSBERG
		NANTICOKE TGS, OH, NANTICOKE
		R.L. HEARN TGS, OH, TORONTO
		THUNDERBAY TGS, OH, THUNDERBAY
		BRUCE A NGS, OH, TIVERTON BRUCE B NGS, OH, TIVERTON
		DARLINGTON NGS, OH, BOWMANVILLE
		PICKERING A NGS, OH, PICKERING PICKERING B NGS, OH, PICKERING
	4999	BRUCE HEAVY WATER PLANTS, OH, TIVERTON
		BRUCE NUCLEAR POWER DEVELOPMENT SERVICES, OH, TIVERTON
		BRUCE SEWAGE PROCESSING PLANT, OH, TIVERTON
		BRUCE NUCLEAR WASTE STORAGE SITE, OH, TIVERTON

		DOUGLAS POINT WMF, AECL, TIVERTON
		NUCLEAR POWER DEMONSTRATION WMF, AECL, ROLPHTON
41	4111	DARLINGTON NGS-CONSTRUCTION, OH, BOWMANVILLE
--	----	CHALK RIVER NUCLEAR LABORATORIES, AECL, CHALK RIVER
--	----	AGUASABON GS
		ARNPRIOR GS
		DECEW NF 23 GS
		PINE PORTAGE GS
		SILVER FALLS GS
		SIR ADAM BECK 2 GS

NGS = NUCLEAR GENERATING STATION
TGS = THERMAL GENERATING STATION (FOSSIL-FUELLED)
GS = HYDRAULIC GENERATING STATION
WMF = WASTE MANAGEMENT FACILITY
OH = ONTARIO HYDRO
AECL = ATOMIC ENERGY OF CANADA LIMITED

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
Abietic Acid	514-10-3	-
Acenaphthene	83-32-9	19
Acenaphthene, 5-nitro	602-87-9	19
Acenaphthylene	208-96-8	19
Acridine	260-94-6	-
Acrolein	107-02-8	18
Acrylamide	79-06-1	-
Acrylonitrile	107-13-1	18
Aluminum	7429-90-5	9
4-Aminoazobenzene	60-09-3	-
Aniline	62-53-3	-
Anthracene	120-12-7	19
Antimony	7440-36-0	10
Aroclor 1016 (PCB)	12674-11-2	27
Aroclor 1221 (PCB)	11104-28-2	27
Aroclor 1232 (PCB)	11141-16-5	27
Aroclor 1242 (PCB)	53469-21-9	27
Aroclor 1248 (PCB)	12672-29-6	27
Aroclor 1254 (PCB)	11097-69-1	27
Aroclor 1260 (PCB)	11096-82-5	27
Arsenic	7440-38-2	10
Benzaldehyde	100-52-7	-
Benz(a)acridine	225-11-6	-
Benz(a)anthracene	56-55-3	19
Benzene	71-43-2	17
Benzeneacetonitrile	140-29-4	-
Benzidine	92-87-5	-
1H-Benzimidazole	51-17-2	-
Benzo(b)fluoranthene	205-99-2	19
Benzo(k)fluoranthene	207-08-9	19
Benzo(g,h,i)perylene	191-24-2	19
Benzo(a)pyrene	50-32-8	19
Benzo(h)quinoline	230-27-3	-
Benzo(b)thiophene	95-15-8	-
Benzyl alcohol	100-51-6	-
Beryllium	7440-41-7	9
Biphenyl	92-52-4	19
Borneol	507-70-0	-
Boron	7440-42-8	9
1-Bromo-2-chloroethane	107-04-0	-
Bromodichloromethane	75-27-4	16
Bromoform	75-25-2	16
Bromomethane	74-83-9	16

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
p-Bromophenol	106-41-2	-
4-Bromophenyl phenyl ether	101-55-3	19
1,3-Butadiene	106-99-0	-
Butanal	123-72-8	-
2-Butenoic acid	3724-65-0	-
2-(2-Butoxyethoxy)ethanol	112-34-5	-
Butylamine	109-73-9	-
N-t-butyl-2-benzothiazolesulphenamide	95-31-8	-
Butylbenzylphthalate	85-68-7	19
Cadmium	7440-43-9	9
Camphene	79-92-5	19
9H-Carbazole	86-74-8	-
Carbon Disulfide	75-15-0	-
Carbon tetrachloride	56-23-5	16
Chorinated dibenzofurans*	N/A	24
Chorinated dibenzo-p-dioxins*	N/A	24
Chlorobenzene	108-90-7	16
Chlorodehydroabietic acid	57055-38-6	-
Chlorodibromomethane	124-48-1	16
Chloroform	67-66-3	16
Chloromethane	74-87-3	16
Bis(2-chloroethoxy)methane	111-91-1	19
Bis(2-chloroethyl)ether	111-44-4	19
Bis(2-chloroisopropyl)ether	108-60-1	19
Bis(chloromethyl)ether	542-88-1	-
4-Chloro-3-methylphenol	59-50-7	20
1-Chloronaphthalene	90-13-1	19
2-Chloronaphthalene	91-58-7	19
o-Chlorophenol	95-57-8	20
4-Chlorophenylphenyl ether	7005-72-3	19
Chromium	7440-47-3	9
Chrysene	218-01-9	19
Cineole	470-82-6	-
Cobalt	7440-48-4	9
Copper	7440-50-8	9
m-Cresol	108-39-4	20
o-Cresol	95-48-7	20
p-Cresol	106-44-5	20
Cyclohexanol	108-93-0	-
Cyclohexanone	108-94-1	-
Cyclohexylamine	108-91-8	-
n-Cyclohexyl-2-benzothiazole sulphenamide	95-33-0	-
Dehydroabietic acid	1740-19-8	-

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
Dibenz(a,h)anthracene	53-70-3	19
2,6-Di-t-butyl-4-methylphenol	128-37-0	-
Di-n-butylphthalate	84-74-2	19
Di-n-octyl phthalate	117-84-0	19
1,2-Dichlorobenzene	95-50-1	16
1,3-Dichlorobenzene	541-73-1	16
1,4-Dichlorobenzene	106-46-7	16
3,3'-Dichlorobenzidine	91-94-1	-
1,4-Dichlorobut-2-ene	764-41-0	-
1,2-Dichlorobut-3-ene	760-23-6	-
Dichlorobutene (mixture)	11069-19-5	-
1,1-Dichloroethane	75-34-3	16
1,2-Dichloroethane	107-06-2	16
Cis-1,2-Dichloroethylene	156-59-2	-
Trans-1,2-Dichloroethylene	156-60-5	16
1,1-Dichloroethylene	75-35-4	16
4,5-Dichloroguaiacol	2460-49-3	-
2,4-Dichlorophenol	120-83-2	20
2,6-Dichlorophenol	87-65-0	20
1,2-Dichloropropane	78-87-5	16
Cis-1,3-Dichloropropylene	10061-01-5	16
Trans-1,3-Dichloropropylene	10061-02-6	16
1,2-Diethylbenzene (ortha)	135-01-3	-
1,3-Diethylbenzene (meta)	141-93-5	-
Diethyl phthalate (DEP)	84-66-2	-
n,n-Diethyl-m-toluamide (DEET)	134-62-3	-
5,6-Dihydro-2-methyl-1,4-oxathiin-3-carboxanilide	5234-68-4	-
5,6-Dihydro-2-methyl-1,4-oxathiin-3-carboxanilide-4,4-dioxide	5259-88-1	-
Dimethyl disulphide	624-92-0	-
Dimethylphenol	1300-71-6	-
2,4-Dimethylphenol	105-67-9	20
2,5-Dimethylphenol	95-87-4	-
2,6-Dimethylphenol	576-26-1	-
3,4-Dimethylphenol	95-65-8	-
3,5-Dimethylphenol	108-68-9	-
Dimethyl sulphide	75-18-3	-
4,6-Dinitro-o-cresol	534-52-1	20
2,4-Dinitrophenol	51-28-5	20
2,4-Dinitrotoluene	121-14-2	19
2,6-Dinitrotoluene	606-20-2	19
4,4'-Di-n-octyldiphenylamine	101-67-7	-

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
1,4-Dioxane	123-91-1	-
Diphenylamine	122-39-4	19
Diphenyl ether	101-84-8	19
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8	-
Diphenyl 4,4'-methylenedicarbanilate	101-65-5	-
Ethanol	64-17-5	-
Ethylbenzene	100-41-4	17
Bis(2-Ethylhexyl)phthalate	117-81-7	19
Ethylene dibromide	106-93-4	16
Ethylene thiourea	96-45-7	-
Eugenol	97-53-0	-
Fluoranthene	206-44-0	19
Fluorene	86-73-7	19
Formaldehyde	50-00-0	-
Furfural	98-01-1	-
Guaiacol	90-05-1	-
Hexachlorobenzene	118-74-1	23
Hexachlorobutadiene (HCBD)	87-68-3	23
1,2,3,4,5,6-Hexachlorocyclohexane (gamma isomer) (Lindane)	58-89-9	-
Hexachlorocyclopentadiene	77-47-4	23
Hexachloroethane	67-72-1	23
Hydrazine	302-01-2	-
Hydrogen sulphide	7783-06-4	-
2-Hydroxybiphenyl	90-43-7	-
4-Hydroxybiphenyl	92-69-3	-
2-Hydroxy-3-methyl-2-cyclopenten-1-one	80-71-7	-
Indeno(1,2,3-cd)pyrene	193-39-5	19
Indole	120-72-9	19
Isopimaric acid	5835-26-7	-
Lead	7439-92-1	9
Levopimaric acid	79-54-9	-
Limonene	138-86-3	-
Lithium	7439-93-2	9
Mercaptobenzothiazole	149-30-4	-
2-Mercaptobenzothiazole disulphide	120-78-5	-
2-Mercaptoethanol	60-24-2	-
Mercury	7439-97-6	12
2,2-Methylenebis(6-nonyl)-p-cresol	7786-17-6	-
Methylene chloride	75-09-2	16
Methyl ethyl ketone	78-93-3	-
n-Methylformamide	123-39-7	-
Methylmethacrylate	80-62-6	-

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
1-Methylnaphthalene	90-12-0	19
2-Methylnaphthalene	91-57-6	19
2-Methylpyridine	109-06-8	-
Methyl styrene	25013-15-4	-
m-Methylstyrene	100-80-1	-
p-Methylstyrene	622-97-9	-
Molybdenum	7439-98-7	9
Morpholine	110-91-8	-
n-Morpholinyl-2-benzothiazole sulphenamide	102-77-2	-
Naphthalene	91-20-3	19
1-Naphthalenol	90-15-3	-
Neoabietic acid	471-77-2	-
Nickel	7440-02-0	9
Nitrobenzene	98-95-3	-
1-Nitronaphthalene	86-57-7	-
2-Nitronaphthalene	581-89-5	-
2-Nitrophenol	88-75-5	-
4-Nitrophenol	100-02-7	20
n-Nitrosodimethylamine	62-75-9	-
n-Nitrosodi-n-propylamine	621-64-7	19
n-Nitrosodiphenylamine	86-30-6	19
4-Nitrosomorpholine	59-89-2	-
Octachlorostyrene	29082-74-4	23
Oleic Acid	112-80-1	-
Pentachlorobenzene	608-93-5	23
Pentachlorophenol	87-86-5	20
Perylene	198-55-0	19
Phenanthrene	85-01-8	19
Phenol	108-95-2	20
n-phenylacetomide	103-84-4	-
Pimaric acid	127-27-5	-
Pine oil	8002-09-3	-
Potassium ethyl xanthate	140-89-6	-
Potassium hexyl xanthate	2720-76-5	-
Pyrene	129-00-0	19
Quinoline	91-22-5	-
8-Quinolinol	148-24-3	-
Selenium	7782-49-2	10
Silver	7440-22-4	9
Sodium butylxanthate	141-33-3	-
Sodium dimethyl dithio carbamate	128-04-1	-
Sodium ethylxanthate	140-90-9	-
Strontium	7440-24-6	9

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
Styrene	100-42-5	17
Tannic acid	1401-55-4	-
Tetrachloroacetone	31422-61-4	-
1,1,3,3-Tetrachloroacetone	632-21-3	-
1,2,3,4-Tetrachlorobenzene	634-66-2	23
1,2,3,5-Tetrachlorobenzene	634-90-2	23
1,2,4,5-Tetrachlorobenzene	95-94-3	23
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	24
1,1,1,2-Tetrachlorethane	630-20-6	-
1,1,2,2-Tetrachlorethane	79-34-5	16
Tetrachloroethylene	127-18-4	16
Tetrachloroguaiacol	2539-17-5	-
2,3,4,5-Tetrachlorophenol	4901-51-3	20
2,3,4,6-Tetrachlorophenol	58-90-2	20
2,3,5,6-Tetrachlorophenol	935-95-5	20
Tetraethyl lead	78-00-2	13
Tetraethyl thiuram disulphide	97-77-8	-
Tetrahydrofuran	109-99-9	-
1,2,3,4-Tetrahydronaphthalene (Tetralin)	119-64-2	-
Tetramethyl thiuram disulphide	137-26-8	-
Thallium	7440-28-0	9
Thiophene	110-02-1	-
Thiourea	62-56-6	-
Toluene	108-88-3	17
2,4-Toluene diisocyanate	584-84-9	-
2,6-toluene diisocyanate (2,6-TDI)	91-08-7	-
Toluene diisocyanate-mixture (TDI)	26471-62-5	-
Tributyl phosphate	126-73-8	-
1,1,3-Trichloroacetone	921-03-9	-
1,2,3-Trichlorobenzene	87-61-6	23
1,2,4-Trichlorobenzene	120-82-1	23
1,1,1-Trichloroethane	71-55-6	-
1,1,2-Trichloroethane	79-00-5	16
Trichloroethylene	79-01-6	16
Trichlorofluoromethane	75-69-4	16
Trichloroguaiacol	61966-36-7	-
2,3,4-Trichlorophenol	15950-66-0	20
2,3,5-Trichlorophenol	933-78-8	20
2,4,5-Trichlorophenol	95-95-4	20
2,4,6-Trichlorophenol	88-06-2	20
2,4,5-Trichlorotoluene	6639-30-1	23
Triethyl lead	N/A	13
1,2,4-Trimethylbenzene	95-63-6	-

TABLE 2 - EFFLUENT MONITORING PRIORITY POLLUTANTS LIST (EMPPL) (1988 UPDATE)

EMPPL PARAMETERS	CAS #	ANALYTICAL TEST GROUP #
Trimethylbenzenes	25551-13-7	-
Trimethylnaphthalenes	28652-77-9	-
Trixylyl phosphate	25155-23-1	-
Uranium	7440-61-1	9
Vanadium	7440-62-2	9
Vanillic acid	121-34-6	-
Vinyl chloride	75-01-4	16
o-Xylene	95-47-6	17
m-Xylene	108-38-3	17
p-Xylene	106-42-3	17
Zinc	7440-66-6	9
Zinc diethyl dithio carbamate	14324-55-1	-

* Represents tetra-, penta-, hexa-, hepta-, and octa- congeners

NOTE: 1. MOE analytical methods are NOT currently available for parameters shown in bold print.

2. Italicized print indicates parameters added to EMPPL in the Nov. 1988 update.

Number of parameters with existing validated analytical methods	141
Number of parameters with no analytical methods	125
Total Number of EMPPL Parameters/Groups	266

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

CONVENTIONALS

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	N/A*
2	Cyanide	Cyanide	57-12-5
3	Hydrogen ion (pH)	Hydrogen ion (pH)	N/A*
4a	Nitrogen	Ammonia plus Ammonium	N/A*
		Total Kjeldahl nitrogen	N/A*
4b		Nitrate + Nitrite	N/A*
5a	Organic carbon	Dissolved organic carbon (DOC)	N/A*
5b		Total organic carbon (TOC)	N/A*
6	Total phosphorus	Total phosphorus	7723-14-0
7	Specific conductance	Specific conductance	N/A*
8	Suspended solids	Total suspended solids (TSS)	N/A*
		Volatile suspended solids (VSS)	N/A*
14	Phenolics (4AAP)	Phenolics (4AAP)**	N/A*
15	Sulphide	Sulphide	N/A*
25	Solvent Extractables	Oil and grease	N/A*

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

SECTOR PRIORITY POLLUTANTS

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
9	Total metals	Aluminum	7429-90-5
		Beryllium	7440-41-7
		Boron	7440-42-8
		Cadmium	7440-43-9
		Chromium	7440-47-3
		Cobalt	7440-48-4
		Copper	7440-50-8
		Lead	7439-92-1
		Lithium	7439-93-2
		Molybdenum	7439-98-7
		Nickel	7440-02-0
		Silver	7440-22-4
		Strontium	7440-24-6
		Thallium	7440-28-0
		Vanadium	7440-62-2
		Zinc	7440-66-6
10	Hydrides	Antimony	7440-36-0
		Arsenic	7440-38-2
		Selenium	7782-49-2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	7440-47-3
12	Mercury	Mercury	7439-97-6

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	79-34-5
		1,1,2-Trichloroethane	79-00-5
		1,1-Dichloroethane	75-34-3
		1,1-Dichloroethylene	75-35-4
		1,2-Dichlorobenzene	95-50-1
		1,2-Dichloroethane (Ethylene dichloride)	107-06-2
		1,2-Dichloropropane	78-87-5
		1,3-Dichlorobenzene	541-73-1
		1,4-Dichlorobenzene	106-46-7
		Bromodichloromethane	75-27-4
		Bromoform	75-25-2
		Bromomethane	74-83-9
		Carbon tetrachloride	56-23-5
		Chlorobenzene	108-90-7
		Chloroform	67-66-3
		Chloromethane	74-87-3
		Cis-1,3-Dichloropropylene	10061-01-5
		Dibromochloromethane	124-48-1
		Ethylene dibromide	106-93-4
		Methylene chloride	75-09-2
		Tetrachloroethylene (Perchloroethylene)	127-18-4
		Trans-1,2-Dichloroethylene	156-60-5
		Trans-1,3-Dichloropropylene	10061-02-6
		Trichloroethylene	79-01-6
		Trichlorofluoromethane	75-69-4
		Vinyl chloride (Chloroethylene)	75-01-4

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

SECTOR PRIORITY POLLUTANTS

ANALYTICAL TEST GROUP #	ANALYTICAL TEST GROUP NAME	PARAMETERS	CAS #s†
17	Volatiles, Non-Halogenated	Benzene	71-43-2
		Styrene	100-42-5
		Toluene	108-88-3
		o-Xylene	95-47-6
		m-Xylene and p-Xylene	108-38-3
			& 106-42-3
19	Extractables, Base Neutral	Acenaphthene	83-32-9
		5-nitro Acenaphthene	602-87-9
		Acenaphthylene	208-96-8
		Anthracene	120-12-7
		Benz(a)anthracene	56-55-3
		Benzo(a)pyrene	50-32-8
		Benzo(b)fluoranthene	205-99-2
		Benzo(g,h,i)perylene	191-24-2
		Benzo(k)fluoranthene	207-08-9
		Biphenyl	92-52-4
		Camphene	79-92-5
		1-Chloronaphthalene	90-13-1
		2-Chloronaphthalene	91-58-7
		Chrysene	218-01-9
		Dibenz(a,h)anthracene	53-70-3
		Fluoranthene	206-44-0
		Fluorene	86-73-7
19	Extractables, Base Neutral (continued)	Indeno(1,2,3-cd)pyrene	193-39-5
		Indole	120-72-9
		1-Methylnaphthalene	90-12-0
		2-Methylnaphthalene	91-57-6
		Naphthalene	91-20-3
		Perylene	198-55-0
		Phenanthrene	85-01-8
		Pyrene	129-00-0
		Benzyl butyl phthalate	85-68-7
		Bis(2-ethylhexyl) phthalate	117-81-7
		Di-n-butyl phthalate	84-74-2
		4-Bromophenyl phenyl ether	101-55-3
		4-Chlorophenyl phenyl ether	7005-72-3
		Bis(2-chloroisopropyl)ether	108-60-1
		Bis(2-chloroethyl)ether	111-44-4
		Diphenyl ether	10-184-8
		2,4-Dinitrotoluene	121-14-2
		2,6-Dinitrotoluene	606-20-2
		Bis(2-chloroethoxy)methane	111-91-1
		Diphenylamine	122-39-4
		N-Nitrosodiphenylamine	86-30-6
		N-Nitrosodi-n-propylamine	621-64-7

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

SECTOR PRIORITY POLLUTANTS

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	4901-51-3
		2,3,4,6-Tetrachlorophenol	58-90-2
		2,3,5,6-Tetrachlorophenol	935-95-5
		2,3,4-Trichlorophenol	15950-66-0
		2,3,5-Trichlorophenol	933-78-8
		2,4,5-Trichlorophenol	95-95-4
		2,4,6-Trichlorophenol	88-06-2
		2,4-Dimethyl phenol	105-67-9
		2,4-Dinitrophenol	51-28-5
		2,4-Dichlorophenol	120-83-2
		2,6-Dichlorophenol	87-65-0
		4,6-Dinitro-o-cresol	534-52-1
		2-Chlorophenol	95-57-8
		4-Chloro-3-methylphenol	59-50-7
		4-Nitrophenol	100-02-7
		m-Cresol	108-39-4
		o-Cresol	95-48-7
		p-Cresol	106-44-5
		Pentachlorophenol	87-86-5
		Phenol	108-95-2

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	634-66-2
		1,2,3,5-Tetrachlorobenzene	634-90-2
		1,2,4,5-Tetrachlorobenzene	95-94-3
		1,2,3-Trichlorobenzene	87-61-6
		1,2,4-Trichlorobenzene	120-82-1
		2,4,5-Trichlorotoluene	6639-30-1
		Hexachlorobenzene	118-74-1
		Hexachlorobutadiene	87-68-3
		Hexachlorocyclopentadiene	77-47-4
		Hexachloroethane	67-72-1
		Octachlorostyrene	29082-74-4
		Pentachlorobenzene	608-93-5
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
		Octachlorodibenzo-p-dioxin	326-88-7
		Octachlorodibenzofuran	Unavailable
		Total heptachlorinated dibenzo-p-dioxins	Unavailable
		Total heptachlorinated dibenzofurans	Unavailable
		Total hexachlorinated dibenzo-p-dioxins	34465-46-8
		Total hexachlorinated dibenzofurans	Unavailable
		Total pentachlorinated dibenzo-p-dioxins	Unavailable
		Total pentachlorinated dibenzofurans	Unavailable
		Total tetrachlorinated dibenzo-p-dioxins	Unavailable
		Total tetrachlorinated dibenzofurans	Unavailable

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

SECTOR PRIORITY POLLUTANTS

ANALYTICAL TEST GROUP #	ANALYTICAL TEST GROUP NAME	PARAMETERS	CAS #s†
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	Unavailable
28a	Open Characterization - Volatiles		
28b	Open Characterization - Extractables		
29	Open Characterization - Elemental	Aluminum	7429-90-5
		Antimony	7440-36-0
		Arsenic	7440-38-2
		Barium	7440-39-3
		Beryllium	7440-41-7
		Bismuth	7440-69-9
		Boron	7440-42-8
		Cadmium	7440-43-9
		Calcium	7440-70-2
		Cerium	7440-45-1
		Cesium	7440-46-2
		Chromium	7440-47-3
		Cobalt	7440-48-4
		Copper	7440-50-8
		Dysprosium	7429-91-6
		Erbium	7440-52-0
		Europium	7440-53-1
		Gadolinium	7440-54-2
		Gallium	7440-55-3
		Germanium	7440-56-4
		Gold	7440-57-5

ANALYTICAL TEST GROUP #	ANALYTICAL TEST GROUP NAME	PARAMETERS	CAS #s†
29	Open Characterization - Elemental (continued)	Hafnium	7440-58-6
		Holmium	7440-60-0
		Indium	7440-74-6
		Iridium	7439-88-5
		Iron	7439-89-6
		Lanthanum	7439-91-0
		Lead	7439-92-1
		Lithium	7439-93-2
		Lutetium	7439-94-3
		Magnesium	7439-95-4
		Manganese	7439-96-5
		Mercury	7439-97-6
		Molybdenum	7439-98-7
		Neodymium	7440-00-8
		Nickel	7440-02-0
		Niobium	7440-03-1
		Osmium	7440-04-2
		Palladium	7440-05-3
		Phosphorus	7723-14-0
		Platinum	7440-06-4
		Potassium	7440-09-7
		Praseodymium	7440-10-0
		Rhenium	7440-15-5
		Rhodium	7440-16-6
		Rubidium	7440-17-7
		Ruthenium	7440-18-8
		Samarium	7440-19-9
		Scandium	7440-20-2
		Selenium	7782-49-2
		Silicon	7440-21-3

TABLE 3 - ELECTRIC POWER GENERATION (EPG) SECTOR

CONVENTIONAL AND SECTOR PRIORITY POLLUTANT LIST (SHOWN BY ANALYTICAL TEST GROUPS)

SECTOR PRIORITY POLLUTANTS

ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s†
29	Open Characterization - Elemental (continued)	Silver	7440-22-4
		Sodium	7440-02-35
		Strontium	7440-24-6
		Sulfur	7704-34-9
		Tantalum	7440-25-7
		Tellurium	13494-80-9
		Terbium	7440-27-9
		Thallium	7440-28-0
		Thorium	7440-29-1
		Thulium	7440-30-4
		Tin	7440-31-5
		Titanium	7440-32-6
		Tungsten	7440-33-7
		Uranium	7440-61-1
		Vanadium	7440-62-2
		Ytterbium	7440-64-4
		Yttrium	7440-65-5
		Zinc	7440-66-6
		Zirconium	7440-67-7

SECTOR-SPECIFIC CONVENTIONAL POLLUTANTS (NOT ON EMPPL)

ANALYTICAL TEST GROU #	NAME	PARAMETERS	CAS #s†
E1	Metals	Iron	7439-89-6
E2	Temperature	Temperature	
		Temperature Rise	
E3	Chlorine (TRC)	Chlorine	
E4	Diethanolamine	Diethanolamine	

† CAS #s - Chemical Abstract Service Registry Numbers

* N/A - Not Applicable

** 4AAP = 4-amino antipyrine method

TABLE 4 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING PROGRAM

NUMBER OF CHARACTERIZATIONS AND DIOXIN TESTS PER STATION

SITE	STREAM	CHARACTERIZATIONS		DIOXINS	
		INDUSTRY	MOE	INDUSTRY	MOE
Atikokan Thermal Generating Station	Intake	1	0	0	0
	Boiler Blowdown	0	0	0	0
	Furnace Ash Water Treatment	1	1	0	1
	Oily Water Separator	1	0	0	0
	Neutralization Sump	0	0	0	0
	Outfall	1	0	0	0
J. C. Keith TGS	Ash Lagoon Discharge	2	1	2	1
Lakeview Thermal Generating Station	Intake	3	0	2	0
	Outfall	3	0	2	0
	Coal Pile Drainage Pond	3	1	2	1
	Bottom Ash Filtration Plant	3	0	2	0
	Boiler Blowdown	2	0	2	0
	Oily Water Separator	2	0	2	0
	Ash Settling Pond Overflow	2	0	2	0
	Coal Pile Runoff Overflow	1	0	1	0
	Switch Yard Drain	1	0	1	0
	Unit Transformer Yard Drainage	2	0	2	0
	South Yard Drain	2	0	2	0
	North Yard Drain	1	0	1	0
Lambton Thermal Generating Station	Intake	1	0	0	0
	Ash Filter Plant	1	0	0	0
	Boiler Blowdown	0	0	0	0
	Lake Lambton	1	0	0	0
	Outfall	1	0	0	0
Lennox Thermal Generating Station	Intake	2	0	2	0
	Oily Water Treatment Pond Discharge	2	1	2	1
	West Interceptor	2	0	2	0
	East Interceptor	2	0	2	0
	Air Pre-heaters Wash Lagoon	2	0	2	0
Nanticoke Thermal Generating Station	Intake	3	0	2	0
	Ash Lagoon Effluent	3	1	2	1
	Boiler Blowdown	2	0	2	0
	Unit 2 Floor Drain Sump	2	0	2	0
	North Yard Drain	2	0	2	0
	Coal Pile Runoff Overflow	2	0	2	0
	Water Treatment Plant Neutralization Sump	0	0	0	0
	Condensor Cooling Water	1	0	0	0
R. L. Hearn Thermal Generating Station	Intake	2	0	2	0
	Drainage Collection Sump	2	1	2	1

TABLE 4 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING PROGRAM

NUMBER OF CHARACTERIZATIONS AND DIOXIN TESTS PER STATION

SITE	STREAM	CHARACTERIZATIONS		DIOXINS	
		INDUSTRY	MOE	INDUSTRY	MOE
Thunder Bay Thermal Generating Station	Intake	3	0	2	0
	Ash Transport Water Treatment System	3	0	2	0
	Ash Transport Water Treatment System Overflow	2	1	2	1
	Water Treatment Plant Neutralization Sump	2	0	2	0
	Oily Water Separator	2	0	2	0
	Coal Pile Runoff Pond	2	0	2	0
	Boiler Blowdown	0	0	0	0
	Condensor Cooling Water Outfall	1	0	0	0
Decew Falls Hydraulic Generating Station	Transformer Drainage Sump	1	0	1	0
	Catch Basin	1	1	1	1
Pine Portage Hydraulic Generating Station	Intake	2	0	2	0
	Drainage Sump	2	1	2	1
Sir Adam Beck Hydraulic Generating Station	Intake	2	0	2	0
	Drainage Sump	2	1	2	1
Bruce A Nuclear Generating Station	Intake	2	0	2	0
	Outfall	2	0	2	0
	Boiler Blowdown	2	0	2	0
	Boiler Wet Lay-up	1	0	1	0
	Water Treatment Plant Neutralization Sump	2	1	2	1
	Radioactive Liquid Waste Management Tank	2	0	2	0
	Turbine Room Sump Unit	2	1	2	1
	Reactor Auxiliary Bay Sump	2	0	2	0
	Services Building	2	0	2	0
	Water Treatment Plant	2	0	2	0
	Ancillary Services Building	2	0	2	0
	Accumulator Building	2	0	2	0
	ECI Water Storage Tank Building	2	0	2	0
Bruce B Nuclear Generating Station	Intake	0	0	0	0
	Outfall	0	0	0	0
	Radioactive Liquid Waste Disposal Tank Pump Discharge	2	0	2	0
Bruce Heavy Water Plants	Intake	2	0	2	0
	Outfall	2	0	2	0
	Process Effluent	2	1	2	1
	Degasser Hotwell	2	0	2	0
	Intermittent Stripper Effluent	2	0	2	0
	Effluent Lagoon	2	0	2	0
	Surface Drainage Lagoon	2	0	2	0
	Cooling Water from E4	2	0	2	0
	Cooling Water from North Flare	2	0	2	0
Bruce Nuclear Power Development Services	Sewage Processing Plant Effluent	2	1	2	1
	Stream C Tie Road	2	0	2	0
	Stream C at Baie du Dore	2	0	2	0
	Radioactive Waste Disposal Site Drainage	2	0	2	0
	Condensate Plant Neutralization Sump	2	0	2	0
	Ditch	2	0	2	0

TABLE 4 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING PROGRAM

NUMBER OF CHARACTERIZATIONS AND DIOXIN TESTS PER STATION

SITE	STREAM	CHARACTERIZATIONS		DIOXINS	
		INDUSTRY	MOE	INDUSTRY	MOE
Chalk River Nuclear Laboratories	Duke Stream	1	0	1	0
	Perch Creek	1	0	1	0
	NRX Intake	1	0	1	0
	Pump House Drain	1	0	1	0
	Process Sewer	1	1	1	1
	Sanitary Sewer	1	0	1	0
	01 Stream	1	0	1	0
	02 Stream	1	0	1	0
	03 Stream	1	0	1	0
	04 Stream	1	0	1	0
	05 Stream	1	0	1	0
Darlington Nuclear Generating Station (under construction)	Intake	3	0	2	0
	Sewage Treatment Plant	3	1	2	1
	Boiler Blowdown	2	0	2	0
	Water Treatment Plant	2	0	2	0
	Storm Drain	2	0	2	0
	Pipe Cleaning Rinse Tank A	2	0	1	0
	Pipe Cleaning Rinse Tank B	2	0	2	0
	Waste Lagoon	3	0	2	0
	Waste Disposal Site Settling Pond	3	0	2	0
Douglas Point Nuclear Generating Station	Intake	1	0	1	0
	Outfall	2	1	2	1
Nuclear Power Demonstration Waste Management Facility	Intake	2	0	2	0
	Inactive Drainage	2	1	2	1
	Manhole Number 2	2	0	2	0
Pickering Nuclear Generating Station	Intake	0	0	0	0
	Outfall Unit 3	0	0	0	0
	Outfall Unit 5	0	0	0	0
	Radioactive Liquid Waste Management Tank	2	0	2	0

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
FOSSIL FUELLED THERMAL GENERATING STATIONS			
Atikokan Thermal Generating Station	Intake	N/A	N/A
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Furnace Ash Water Treatment	Ash Transport Water System	Process Effluent
	Oily Water Separator	Oily Water Separator	Process Effluent
	Neutralization Sump	Water Treatment Plant Neutralization Sump	Process Effluent
	Outfall	-	Once Through Cooling Water
J. C. Keith Thermal Generating Station	Ash Lagoon Discharge	-	Storm Water
Lakeview Thermal Generating Station	Intake - Lake Ontario	N/A	N/A
	Outfall - units 1-4 or 5-8	-	Once Through Cooling Water
	Coal Pile Drainage Pond	-	Coal Pile Effluent
	Bottom Ash Filtration Plant	Ash Transport Water System	Process Effluent
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Oily Water Separator	Oily Water Separator	Process Effluent
	Ash Settling Pond Overflow	Ash Transport Water Treatment System Overflow	Emergency Overflow
	Coal Pile Runoff Overflow	-	Coal Pile Effluent/ Emergency Overflow
	Switch Yard Drainage	-	Storm Water
	Unit Transformer Yard Drainage	-	Storm Water
	South Yard Drain	-	Storm Water
	North Yard Drain	-	Storm Water

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
Lambton Thermal Generating Station	Intake	N/A	N/A
	Ash Filter Plant	Ash Transport Water System	Process Effluent
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Lake Lambton	-	Event Discharge Effluent
	Outfall	-	Once Through Cooling Water
Lennox Thermal Generating Station	Intake	N/A	N/A
	Oily Water Treatment Pond Discharge	Oily Water Separator	Process Effluent
	West Interceptor	-	Storm Water
	East Interceptor	-	Storm Water
	Air Pre-heaters Wash Lagoon	-	Equipment Cleaning Effluent
Nanticoke Thermal Generating Station	Intake	N/A	N/A
	Ash Lagoon Effluent	Ash Transport Water System	Process Effluent
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Unit 2 Floor Drain Sump	-	Potentially Contaminated Building Effluent
	North Yard Drain	-	Storm Water
	Coal Pile Runoff Overflow	-	Coal Pile Effluent/ Emergency Overflow
	Water Treatment Plant Neutralization Sump	Water Treatment Plant Neutralization Sump	Process Effluent
	Condensor Cooling Water	-	Once Through Cooling Water
R. L. Hearn Thermal Generating Station	Intake	N/A	N/A
	Drainage Collection Sump	-	Storm Water

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
Thunder Bay Thermal Generating Station	Intake	N/A	N/A
	Ash Transport Water Treatment System	Ash Transport Water System	Process Effluent
	Ash Transport Water Treatment System Overflow	Ash Transport Water Treatment System Overflow	Emergency Overflow
	Water Treatment Plant Neutralization Sump	Water Treatment Plant Neutralization Sump	Process Effluent
	Oily Water Separator	Oily Water Separator	Process Effluent
	Coal Pile Runoff Pond	-	Coal Pile Effluent
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Condensor Cooling Water Outfall	-	Once Through Cooling Water
HYDRAULIC POWERED GENERATING STATIONS			
Decew Falls Hydraulic Generating Station	Transformer Drainage Sump	-	Storm Water
	Catch Basin	-	Storm Water
Pine Portage Hydraulic Generating Station	Intake	N/A	N/A
	Drainage Sump	-	Potentially Contaminated Building Effluent
Sir Adam Beck Hydraulic Generating Station	Intake	N/A	N/A
	Drainage Sump	-	Potentially Contaminated Building Effluent

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
NUCLEAR POWERED THERMAL GENERATING STATIONS			
Bruce A Nuclear Generating Station	Intake	N/A	N/A
	Outfall	-	Once Through Cooling Water
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Boiler Wet Lay-up	-	Equipment Cleaning Effluent
	Water Treatment Plant Neutralization Sump	Water Treatment Plant Neutralization Sump	Process Effluent
	Radioactive Liquid Waste Management Tank	Radioactive Liquid Waste Management Tanks	Batch Discharge Effluent
	Turbine Room Sump Unit	-	Potentially Contaminated Building Effluent
	Reactor Auxiliary Bay Sump	-	Potentially Contaminated Building Effluent
	Services Building	-	Potentially Contaminated Building Effluent
	Water Treatment Plant	-	Potentially Contaminated Building Effluent
	Ancillary Services Building	-	Potentially Contaminated Building Effluent
	Accumulator Building	-	Potentially Contaminated Building Effluent
	ECI Water Storage Tank Building	-	Potentially Contaminated Building Effluent
Bruce B Nuclear Generating Station	Intake	N/A	N/A
	Outfall	-	Once Through Cooling Water
	Radioactive Liquid Waste Management	Radioactive Liquid Waste Management Tanks	Batch Discharge Effluent

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
Bruce Heavy Water Plants	Intake	N/A	N/A
	Outfall	-	Once Through Cooling Water
	Process Effluent	-	Process Effluent
	Degasser Hotwell	N/A	-
	Intermittent Stripper Effluent	N/A	-
	Effluent Lagoon	Effluent Lagoon	Event Discharge Effluent
	Surface Drainage Lagoon	-	Storm Water
	Cooling Water from E4	N/A	-
	Cooling Water from North Flare	N/A	-
Bruce Nuclear Power Development Services	Sewage Processing Plant Effluent *	-	Process Effluent
	Stream 'C' Tie Road	-	Storm Water
	Stream 'C' at Baie du Dore	-	Storm Water
	Radioactive Waste Disposal Site Drainage **	-	Waste Disposal Site Effluent
	Condensate Plant Neutralization Sump	Condensate Plant Water Treatment Plant	Process Effluent
	Ditch discharging from Bruce NGS A	-	Storm Water

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
Chalk River Nuclear Laboratories	Duke Stream	Duke Stream	Waste Disposal Site Effluent
	Perch Creek	Perch Creek	Waste Disposal Site Effluent
	Intake	N/A	N/A
	Pump House Drain	Powerhouse Drain	Combined Effluent
	Process Sewer	Process Sewer	Once Through Cooling Water
	Sanitary Sewer	Sanitary Sewer	Process Effluent
	01 Stream	01 Stream	Storm Water
	02 Stream	02 Stream	Waste Disposal Site Effluent
	03 Stream	03 Stream	Storm Water
	04 Stream	04 Stream	Storm Water
	05 Stream	05 Stream	Storm Water
Darlington Nuclear Generating Station (under construction)	Intake	N/A	N/A
	Sewage Treatment Plant	Sewage Treatment Plant	Process Effluent
	Boiler Blowdown	Boiler Blowdown	Boiler Blowdown Effluent
	Water Treatment Plant	Water Treatment Plant	Process Effluent
	Storm Drain	-	Storm Water
	Pipe Cleaning Rinse Tank 2	Tank 2	Equipment Cleaning Effluent
	Pipe Cleaning Rinse Tank 4	Tank 4	Equipment Cleaning Effluent
	Waste Lagoon	Site Lagoon	Equipment Cleaning Effluent
	Waste Disposal Site Settling Pond	-	Waste Disposal Site Effluent
Douglas Point Waste Management Facility	Intake	N/A	N/A
	Outfall *	-	Once Through Cooling Water

LEGEND FOR TABLE 5 (CROSS REFERENCE BETWEEN TABLE 5 AND SCHEDULES A TO I)

STATION	NAME OF EFFLUENT STREAM FROM TABLE 5	NAME OF EFFLUENT STREAM FROM SCHEDULES A TO J	EFFLUENT STREAM CLASSIFICATION
Nuclear Power Demonstration Waste Management Facility	Intake	N/A	N/A
	Inactive Drainage	Turbine Hall Sump	Potentially Contaminated Building Effluent
	Manhole 2	Outside Sump	Storm Water
Pickering Nuclear Generating Station	Intake	N/A	N/A
	Outfall Unit 3	-	Once Through Cooling Water
	Outfall Unit 5	-	Once Through Cooling Water
	Radioactive Liquid Waste Management Tank	Radioactive Liquid Waste Management Tanks	Batch Discharge Effluent

* Requirements in Schedule E

** Requirements in Schedule E

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Atikokan Thermal Generating Station						J.C. Keith TGS
		NAME OF EFFLUENT STREAM:	Intake	Boiler Blowdown	Furnace Ash Water Treatment	Oily Water Separator	Neutralization Sump	Outfall	Ash Lagoon Discharge
ANALYTICAL TEST GROUP		PARAMETERS							
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/1	1/1	1/1	-	1/1	1/1	2/2
2	Total cyanide	Total cyanide	0/1	-	0/1	-	-	0/1	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	7	8	9	8	7	7	7
4a	Nitrogen	Ammonia plus Ammonium	0/1	1/1	0/1	1/1	1/1	0/1	0/2
		Total Kjeldahl nitrogen	1/1	0/1	1/1	1/1	1/1	0/1	1/2
4b		Nitrate + Nitrite	0/1	0/1	0/1	1/1	0/1	0/1	1/2
5a	Organic carbon	Dissolved organic carbon (DOC)	1/1	1/1	1/1	1/1	1/1	1/1	2/2
5b		Total organic carbon (TOC)	1/1	0/1	1/1	1/1	1/1	1/1	1/2
6	Total phosphorus	Total phosphorus	0/1	1/1	1/1	0/1	0/1	0/1	1/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0/1	0/1	1/1	0/1	1/1	0/1	-
		Volatile suspended solids (VSS)	-	-	-	-	-	-	-
9	Total metals	Aluminum	1/1	1/1	1/1	-	1/1	1/1	2/2
		Beryllium	0/1	0/1	0/1	-	0/1	0/1	0/2
		Cadmium	0/1	0/1	0/1	-	0/1	0/1	0/2
		Chromium	0/1	0/1	1/1	-	0/1	0/1	0/2
		Cobalt	0/1	0/1	0/1	-	0/1	0/1	0/2
		Copper	1/1	0/1	1/1	-	0/1	1/1	0/2
		Lead	0/1	0/1	0/1	-	0/1	0/1	0/2
		Molybdenum	1/1	0/1	1/1	-	0/1	1/1	2/2
		Nickel	0/1	0/1	1/1	-	0/1	0/1	0/2
		Silver	0/1	0/1	0/1	-	0/1	0/1	0/2
		Thallium	-	-	-	-	-	-	0/2
		Vanadium	0/1	0/1	1/1	-	0/1	0/1	0/2
		Zinc	1/1	1/1	1/1	-	1/1	1/1	1/2
10	Hydrides	Antimony	0/1	0/1	0/1	0/1	0/1	0/1	0/2
		Arsenic	0/1	0/1	1/1	0/1	0/1	0/1	0/2
		Selenium	0/1	0/1	0/1	0/1	0/1	0/1	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0/1	0/1	1/1	0/1	0/1	0/1	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Atikokan Thermal Generating Station						J.C. Keith TGS
		NAME OF EFFLUENT STREAM:	Intake	Boiler Blowdown	Furnace Ash Water Treatment	Oily Water Separator	Neutralization Sump	Outfall	Ash Lagoon Discharge
ANALYTICAL TEST GROUP		PARAMETERS							
12	Mercury	Mercury	0/1	0/1	0/1	-	0/1	0/1	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	-	-	-	-	-	-	0/2
15	Sulphide	Sulphide	0/1	-	0/1	0/1	-	0/1	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/1	-	0/1	0/1	-	0/1	0/2
		1,1,2-Trichloroethane	0/1	-	0/1	0/1	-	0/1	0/2
		1,1-Dichloroethane	0/1	-	0/1	0/1	-	0/1	0/2
		1,1-Dichloroethylene	0/1	-	0/1	0/1	-	0/1	0/2
		1,2-Dichlorobenzene	0/1	-	0/1	0/1	-	0/1	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/1	-	0/1	0/1	-	0/1	0/2
		1,2-Dichloropropane	0/1	-	0/1	0/1	-	0/1	0/2
		1,3-Dichlorobenzene	0/1	-	0/1	0/1	-	0/1	0/2
		1,4-Dichlorobenzene	0/1	-	0/1	0/1	-	0/1	0/2
		Bromoform	0/1	-	0/1	0/1	-	0/1	0/2
		Bromomethane	0/1	-	0/1	0/1	-	0/1	0/2
		Carbon tetrachloride	0/1	-	0/1	0/1	-	0/1	0/2
		Chlorobenzene	0/1	-	0/1	0/1	-	0/1	0/2
		Chloroform	0/1	-	0/1	0/1	-	0/1	0/2
		Chloromethane	0/1	-	0/1	0/1	-	0/1	0/2
		Cis-1,3-Dichloropropylene	0/1	-	0/1	0/1	-	0/1	0/2
		Dibromochloromethane	0/1	-	0/1	0/1	-	0/1	0/2
		Ethylene dibromide	0/1	-	0/1	0/1	-	0/1	0/2
		Methylene chloride	0/1	-	0/1	0/1	-	0/1	2/2
		Tetrachloroethylene (Perchloroethylene)	-	-	-	-	-	-	0/2
		Trans-1,2-Dichloroethylene	0/1	-	0/1	0/1	-	0/1	0/2
		Trans-1,3-Dichloropropylene	0/1	-	0/1	0/1	-	0/1	0/2
		Trichloroethylene	0/1	-	0/1	0/1	-	0/1	0/2
		Trichlorofluoromethane	-	-	-	-	-	-	0/2
		Vinyl chloride (Chloroethylene)	0/1	-	0/1	0/1	-	0/1	0/2
17	Volatiles, Non-Halogenated	Benzene	0/1	-	0/1	0/1	-	0/1	0/2
		Styrene	-	-	-	-	-	-	0/2
		Toluene	0/1	0/1	0/1	0/1	0/1	0/1	0/2
		o-Xylene	0/1	0/1	0/1	0/1	0/1	0/1	0/2
		m-Xylene and p-Xylene	0/1	0/1	0/1	0/1	0/1	0/1	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Atikokan Thermal Generating Station						J.C. Keith TGS
		NAME OF EFFLUENT STREAM:	Intake	Boiler Blowdown	Furnace Ash Water Treatment	Oily Water Separator	Neutralization Sump	Outfall	Ash Lagoon Discharge
ANALYTICAL TEST GROUP		PARAMETERS							
19	Extractables, Base Neutral	Acenaphthene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		5-nitro Acenaphthene	-	-	-	-	-	-	-
		Acenaphthylene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Anthracene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benz(a)anthracene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benzo(a)pyrene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benzo(b)fluoranthene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benzo(g,h,i)perylene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benzo(k)fluoranthene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Biphenyl	-	-	-	-	-	-	0 / 2
		Camphene	-	-	-	-	-	-	0 / 2
		1-Chloronaphthalene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		2-Chloronaphthalene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Chrysene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Dibenz(a,h)anthracene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Fluoranthene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Fluorene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Indeno(1,2,3-cd)pyrene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Indole	-	-	-	-	-	-	0 / 2
		1-Methylnaphthalene	-	-	-	-	-	-	0 / 2
		2-Methylnaphthalene	-	-	-	-	-	-	0 / 2
		Naphthalene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Perylene	-	-	-	-	-	-	0 / 2
		Phenanthrene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Pyrene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Benzyl butyl phthalate	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Bis(2-ethylhexyl) phthalate	0 / 1	-	0 / 1	0 / 1	-	0 / 1	2 / 2
		Di-n-butyl phthalate	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		4-Bromophenyl phenyl ether	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		4-Chlorophenyl phenyl ether	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Bis(2-chloroisopropyl)ether	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Bis(2-chloroethyl)ether	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Diphenyl ether	-	-	-	-	-	-	-
		2,4-Dinitrotoluene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		2,6-Dinitrotoluene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Bis(2-chloroethoxy)methane	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		Diphenylamine	-	-	-	-	-	-	0 / 2
		N-Nitrosodiphenylamine	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
		N-Nitrosodi-n-propylamine	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Atikokan Thermal Generating Station						J.C. Keith TGS
	NAME OF EFFLUENT STREAM:	Intake	Boiler Blowdown	Furnace Ash Water Treatment	Oily Water Separator	Neutralization Sump	Outfall	Ash Lagoon Discharge
ANALYTICAL TEST GROUP	PARAMETERS							
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,3,4,6-Tetrachlorophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,3,5,6-Tetrachlorophenol	-	-	-	-	-	-	0 / 2
	2,3,4-Trichlorophenol	-	-	-	-	-		0 / 2
	2,3,5-Trichlorophenol	-	-	-	-	-	-	0 / 2
	2,4,5-Trichlorophenol	-	-	-	-	-	-	0 / 2
	2,4,6-Trichlorophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,4-Dimethyl phenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,4-Dinitrophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,4-Dichlorophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2,6-Dichlorophenol	-	-	-	-	-	-	0 / 2
	4,6-Dinitro-o-cresol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	2-Chlorophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	4-Chloro-3-methylphenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	4-Nitrophenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	m-Cresol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	o-Cresol	-	-	-	-	-	-	0 / 2
	p-Cresol	-	-	-	-	-	-	0 / 2
	Pentachlorophenol	-	-	-	-	-	-	0 / 2
	Phenol	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	1,2,3,5-Tetrachlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	1,2,4,5-Tetrachlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	1,2,3-Trichlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	1,2,4-Trichlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	2 / 2
	2,4,5-Trichlorotoluene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	Hexachlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	Hexachlorobutadiene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	1 / 2
	Hexachlorocyclopentadiene	-	-	-	-	-	-	0 / 2
	Hexachloroethane	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
	Octachlorostyrene	-	-	-	-	-	-	-
	Pentachlorobenzene	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Atikokan Thermal Generating Station						J.C. Keith TGS
		NAME OF EFFLUENT STREAM:	Intake	Boiler Blowdown	Furnace Ash Water Treatment	Oily Water Separator	Neutralization Sump	Outfall	Ash Lagoon Discharge
ANALYTICAL TEST GROUP		PARAMETERS							
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	-	-	-	-	-	-	0 / 2
		Octachlorodibenzo-p-dioxin	-	-	-	-	-	-	0 / 2
		Octachlorodibenzofuran	-	-	-	-	-	-	0 / 2
		Total heptachlorinated dibenzo-p-dioxins	-	-	-	-	-	-	0 / 2
		Total heptachlorinated dibenzofurans	-	-	-	-	-	-	0 / 2
		Total hexachlorinated dibenzo-p-dioxins	-	-	-	-	-	-	0 / 2
		Total hexachlorinated dibenzofurans	-	-	-	-	-	-	0 / 2
		Total pentachlorinated dibenzo-p-dioxins	-	-	-	-	-	-	0 / 2
		Total pentachlorinated dibenzofurans	-	-	-	-	-	-	0 / 2
		Total tetrachlorinated dibenzo-p-dioxins	-	-	-	-	-	-	0 / 2
		Total tetrachlorinated dibenzofurans	-	-	-	-	-	-	0 / 2
25	Solvent Extractables	Oil and grease	0 / 1	-	0 / 1	0 / 1	-	0 / 1	0 / 2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0 / 1	-	0 / 1	0 / 1	-	0 / 1	1 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lakeview Thermal Generation Station											
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Coal Pile Drainage Pond	Bottom Ash Filtration Plant	Boiler Blowdown	Oily Water Separator	Ash Settling Pond Overflow	Coal Pile Runoff Overflow	Switch Yard Drainage	Unit Transformer Yard Drainage	South Yard Drain	North Yard Drain
ANALYTICAL TEST GROUP		PARAMETERS												
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3/3	3/3	3/3	3/3	1/3	2/2	2/2	1/1	1/1	1/1	2/2	1/1
2	Total cyanide	Total cyanide	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	8	6-9	9	7-8	7	9	-	8	8	8	8
4a	Nitrogen	Ammonia plus Ammonium	0/3	0/3	0/3	0/3	0/3	1/3	0/2	0/1	0/1	0/2	0/2	1/1
		Total Kjeldahl nitrogen	1/3	0/3	0/3	1/3	0/3	1/3	1/2	1/1	1/1	0/2	2/2	1/1
4b		Nitrate + Nitrite	3/3	3/3	3/3	3/3	0/3	1/3	2/2	-	1/1	2/2	2/2	1/1
5a	Organic carbon	Dissolved organic carbon (DOC)	3/3	3/3	1/3	3/3	1/3	3/3	2/2	0/1	1/1	1/2	2/2	1/1
5b		Total organic carbon (TOC)	1/3	1/3	0/3	1/3	1/3	1/3	0/2	0/1	1/2	0/2	0/2	1/1
6	Total phosphorus	Total phosphorus	0/3	0/3	0/3	1/3	2/3	0/3	2/2	1/1	0/1	0/2	0/2	1/1
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	2/3	1/3	1/3	2/3	0/3	3/3	2/2	-	1/1	2/2	1/2	1/1
		Volatile suspended solids (VSS)	0/2	0/2	0/2	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	1/1
9	Total metals	Aluminum	3/3	3/3	1/3	3/3	1/3	0/2	2/2	1/1	1/1	2/2	1/2	1/1
		Beryllium	1/3	1/3	0/3	0/3	0/3	0/2	0/2	1/1	0/1	0/2	0/2	0/1
		Cadmium	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Chromium	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Cobalt	1/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Copper	1/3	1/3	0/3	2/3	3/3	2/2	1/2	1/1	1/1	2/2	0/2	1/1
		Lead	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	1/1
		Molybdenum	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	1/1
		Nickel	0/3	0/3	2/3	1/3	2/3	0/2	0/2	1/1	0/1	0/2	0/2	0/1
		Silver	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Thallium	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Vanadium	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Zinc	1/3	1/3	2/3	3/3	2/3	2/2	1/2	1/1	1/1	1/2	0/2	1/1
10	Hydrides	Antimony	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/1	1/1	0/2	0/2	0/1
		Arsenic	0/3	0/3	0/3	3/3	0/3	0/2	2/2	0/1	0/1	0/2	0/2	1/1
		Selenium	0/3	0/3	2/3	1/3	0/3	0/2	0/2	0/1	0/1	0/2	0/2	0/1
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0/1	0/1	0/1	0/1	0/1	1/1	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lakeview Thermal Generation Station											
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Coal Pile Drainage Pond	Bottom Ash Filtration Plant	Boiler Blowdown	Oily Water Separator	Ash Settling Pond Overflow	Coal Pile Runoff Overflow	Switch Yard Drainage	Unit Transformer Yard Drainage	South Yard Drain	North Yard Drain
ANALYTICAL TEST GROUP		PARAMETERS												
12	Mercury	Mercury	0/3	0/3	1/3	0/3	0/3	0/2	0/2	1/1	0/1	0/2	0/2	1/1
14	Phenolics (4AAP)	Phenolics (4AAP)	2/3	1/3	1/3	2/3	2/3	3/3	1/2	1/1	0/1	0/2	0/2	1/1
15	Sulphide	Sulphide	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,1,2-Trichloroethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,1-Dichloroethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,1-Dichloroethylene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,2-Dichlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,2-Dichloropropane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,3-Dichlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,4-Dichlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Bromoform	0/2	0/2	0/2	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Bromomethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Carbon tetrachloride	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Chlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Chloroform	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Chloromethane	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Cis-1,3-Dichloropropylene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Dibromochloromethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Ethylene dibromide	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Methylene chloride	0/3	1/3	0/3	0/3	1/2	1/3	1/2	1/1	1/1	0/2	1/2	1/1
		Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Trans-1,2-Dichloroethylene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Trans-1,3-Dichloropropylene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Trichloroethylene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Trichlorofluoromethane	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Vinyl chloride (Chloroethylene)	0/2	0/2	0/2	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
17	Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Styrene	0/2	0/2	0/2	0/2	0/2	0/2	-	-	-	-	-	-
		Toluene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		o-Xylene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		m-Xylene and p-Xylene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Lakeview Thermal Generation Station											
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Coal Pile Drainage Pond	Bottom Ash Filtration Plant	Boiler Blowdown	Oily Water Separator	Ash Settling Pond Overflow	Coal Pile Runoff Overflow	Switch Yard Drainage	Unit Transformer Yard Drainage	South Yard Drain	North Yard Drain
ANALYTICAL TEST GROUP	PARAMETERS												
19 Extractables, Base Neutral	Acenaphthene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-	-	-	-	-
	Acenaphthylene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Anthracene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benz(a)anthracene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benzo(a)pyrene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benzo(b)fluoranthene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benzo(g,h,i)perylene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benzo(k)fluoranthene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-
	Camphene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	1-Chloronaphthalene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	2-Chloronaphthalene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Chrysene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Dibenz(a,h)anthracene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Fluoranthene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Fluorene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Indeno(1,2,3-cd)pyrene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Indole	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	1-Methylnaphthalene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	2-Methylnaphthalene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Naphthalene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Perylene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Phenanthrene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Pyrene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Benzyl butyl phthalate	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Bis(2-ethylhexyl) phthalate	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Di-n-butyl phthalate	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	4-Bromophenyl phenyl ether	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	4-Chlorophenyl phenyl ether	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Bis(2-chloroisopropyl)ether	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Bis(2-chloroethyl)ether	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Diphenyl ether	-	-	-	-	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	2,6-Dinitrotoluene	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Bis(2-chloroethoxy)methane	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	Diphenylamine	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	N-Nitrosodiphenylamine	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-
	N-Nitrosodi-n-propylamine	0/3	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1	0/2	0/2	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lakeview Thermal Generation Station											
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Coal Pile Drainage Pond	Bottom Ash Filtration Plant	Boiler Blowdown	Oily Water Separator	Ash Settling Pond Overflow	Coal Pile Runoff Overflow	Switch Yard Drainage	Unit Transformer Yard Drainage	South Yard Drain	North Yard Drain
ANALYTICAL TEST GROUP		PARAMETERS												
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/3	0/3	0/1	0/3	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,3,4,6-Tetrachlorophenol	0/2	0/2	0/1	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,3,5,6-Tetrachlorophenol	0/2	0/2	-	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,3,4-Trichlorophenol	0/2	0/2	-	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,3,5-Trichlorophenol	0/2	0/2	-	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,4,5-Trichlorophenol	0/2	0/2	-	0/2	0/2	0/2	0/2	-	0/1	0/2	0/2	0/1
		2,4,6-Trichlorophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		2,4-Dimethyl phenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		2,4-Dinitrophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		2,4-Dichlorophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		2,6-Dichlorophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		4,6-Dinitro-o-cresol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		2-Chlorophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		4-Chloro-3-methylphenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		4-Nitrophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		m-Cresol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		o-Cresol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		p-Cresol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		Pentachlorophenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
		Phenol	0/3	0/3	0/1	0/3	0/2	0/3	0/2	-	0/1	0/2	0/2	0/1
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/3	0/1	0/1	0/2	0/2	0/1
		1,2,4,5-Tetrachlorobenzene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		1,2,3-Trichlorobenzene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		1,2,4-Trichlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	1/1
		2,4,5-Trichlorotoluene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Hexachlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Hexachlorobutadiene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/2	0/2	0/1
		Hexachlorocyclopentadiene	-	-	-	-	-	-	-	-	0/1	-	-	0/1
		Hexachloroethane	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/1	0/1	0/1
		Octachlorostyrene	-	-	-	-	-	-	-	-	-	-	-	-
		Pentachlorobenzene	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	0/1	0/1	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lakeview Thermal Generation Station											
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Coal Pile Drainage Pond	Bottom Ash Filtration Plant	Boiler Blowdown	Oily Water Separator	Ash Settling Pond Overflow	Coal Pile Runoff Overflow	Switch Yard Drainage	Unit Transformer Yard Drainage	South Yard Drain	North Yard Drain
ANALYTICAL TEST GROUP		PARAMETERS												
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total heptachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
		Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2	0/2	0/1
25	Solvent Extractables	Oil and grease	1/3	2/3	2/3	0/3	1/2	3/3	1/2	1/1	0/1	2/2	0/2	1/1
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/3	0/3	0/3	0/3	0/2	0/3	0/2	0/1	1/1	2/2	1/2	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lambton Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Ash Filter Plant	Boiler Blowdown	Lake Lambton	Outfall
ANALYTICAL TEST GROUP		**PARAMETERS**					
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
2	Total cyanide	Total cyanide	0 / 1	0 / 1	-	0 / 1	0 / 1
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	8	8	6 - 7	8
4a	Nitrogen	Ammonia plus Ammonium	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3
		Total Kjeldahl nitrogen	0 / 1	0 / 2	0 / 2	0 / 1	0 / 1
4b		Nitrate + Nitrite	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3
5a	Organic carbon	Dissolved organic carbon (DOC)	3 / 3	3 / 3	0 / 1	3 / 3	3 / 3
5b		Total organic carbon (TOC)	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3
6	Total phosphorus	Total phosphorus	0 / 1	0 / 1	1 / 1	0 / 1	0 / 1
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	1 / 1	0 / 1	0 / 1	0 / 1	1 / 1
		Volatile suspended solids (VSS)	-	-	-	-	-
9	Total metals	Aluminum	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
		Beryllium	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Cadmium	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Chromium	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Cobalt	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Copper	0 / 1	0 / 1	1 / 1	1 / 1	0 / 1
		Lead	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Molybdenum	0 / 1	1 / 1	1 / 1	1 / 1	0 / 1
		Nickel	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Silver	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Thallium	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Vanadium	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Zinc	1 / 1	1 / 1	3 / 3	1 / 1	1 / 1
10	Hydrides	Antimony	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
		Arsenic	-	-	-	-	-
		Selenium	-	-	-	-	-
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lambton Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Ash Filter Plant	Boiler Blowdown	Lake Lambton	Outfall
ANALYTICAL TEST GROUP		PARAMETERS					
12	Mercury	Mercury	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
14	Phenolics (4AAP)	Phenolics (4AAP)	-	-	-	-	-
15	Sulphide	Sulphide	0 / 3	0 / 3	-	0 / 3	0 / 3
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,1,2-Trichloroethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,1-Dichloroethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,1-Dichloroethylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2-Dichlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2-Dichloroethane (Ethylene dichloride)	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2-Dichloropropane	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,3-Dichlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,4-Dichlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Bromoform	0 / 1	0 / 1	-	0 / 1	0 / 1
		Bromomethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		Carbon tetrachloride	0 / 1	0 / 1	-	0 / 1	0 / 1
		Chlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Chloroform	0 / 1	0 / 1	-	0 / 1	0 / 1
		Chloromethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		Cis-1,3-Dichloropropylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Dibromochloromethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		Ethylene dibromide	0 / 1	0 / 1	-	0 / 1	0 / 1
		Methylene chloride	0 / 1	0 / 1	-	0 / 1	0 / 1
		Tetrachloroethylene (Perchloroethylene)	0 / 1	0 / 1	-	0 / 1	0 / 1
		Trans-1,2-Dichloroethylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Trans-1,3-Dichloropropylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Trichloroethylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Trichlorofluoromethane	-	-	-	-	-
		Vinyl chloride (Chloroethylene)	0 / 1	0 / 1	-	0 / 1	0 / 1
17	Volatiles, Non-Halogenated	Benzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Styrene	-	-	-	-	-
		Toluene	0 / 1	0 / 1	-	0 / 1	0 / 1
		o-Xylene	0 / 1	0 / 1	-	0 / 1	0 / 1
		m-Xylene and p-Xylene	0 / 1	0 / 1	-	0 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Lambton Thermal Generating Station				
	NAME OF EFFLUENT STREAM:	Intake	Ash Filter Plant	Boiler Blowdown	Lake Lambton	Outfall
ANALYTICAL TEST GROUP	**PARAMETERS**					
19 Extractables, Base Neutral	Acenaphthene	-	-	-	-	-
	5-nitro Acenaphthene	-	-	-	-	-
	Acenaphthylene	0/1	0/1	-	0/1	-
	Anthracene	0/1	0/1	-	0/1	-
	Benz(a)anthracene	0/1	0/1	-	0/1	-
	Benzo(a)pyrene	0/1	0/1	-	0/1	-
	Benzo(b)fluoranthene	0/1	0/1	-	0/1	-
	Benzo(g,h,i)perylene	0/1	0/1	-	0/1	-
	Benzo(k)fluoranthene	0/1	0/1	-	0/1	-
	Biphenyl	-	-	-	-	-
	Camphene	0/1	0/1	-	0/1	-
	1-Chloronaphthalene	0/1	0/1	-	0/1	-
	2-Chloronaphthalene	0/1	0/1	-	0/1	-
	Chrysene	0/1	0/1	-	0/1	-
	Dibenz(a,h)anthracene	0/1	0/1	-	0/1	-
	Fluoranthene	0/1	0/1	-	0/1	-
	Fluorene	0/1	0/1	-	0/1	-
	Indeno(1,2,3-cd)pyrene	0/1	0/1	-	0/1	-
	Indole	-	-	-	-	-
	1-Methylnaphthalene	-	-	-	-	-
	2-Methylnaphthalene	-	-	-	-	-
	Naphthalene	-	-	-	-	-
	Perylene	0/1	0/1	-	0/1	-
	Phenanthrene	0/1	0/1	-	0/1	-
	Pyrene	0/1	0/1	-	0/1	-
	Benzyl butyl phthalate	0/1	0/1	-	0/1	-
	Bis(2-ethylhexyl) phthalate	0/1	0/1	-	0/1	-
	Di-n-butyl phthalate	0/1	0/1	-	0/1	-
	4-Bromophenyl phenyl ether	0/1	0/1	-	0/1	0/1
	4-Chlorophenyl phenyl ether	0/1	0/1	-	0/1	0/1
	Bis(2-chloroisopropyl)ether	0/1	0/1	-	0/1	0/1
	Bis(2-chloroethyl)ether	0/1	0/1	-	0/1	0/1
	Diphenyl ether	-	-	-	-	-
	2,4-Dinitrotoluene	0/1	0/1	-	0/1	0/1
	2,6-Dinitrotoluene	0/1	0/1	-	0/1	0/1
	Bis(2-chloroethoxy)methane	0/1	0/1	-	0/1	0/1
	Diphenylamine	-	-	-	-	-
	N-Nitrosodiphenylamine	0/1	0/1	-	0/1	0/1
	N-Nitrosodi-n-propylamine	0/1	0/1	-	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lambton Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Ash Filter Plant	Boiler Blowdown	Lake Lambton	Outfall
ANALYTICAL TEST GROUP		PARAMETERS					
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		2,3,4,6-Tetrachlorophenol	-	-	-	-	-
		2,3,5,6-Tetrachlorophenol	-	-	-	-	-
		2,3,4-Trichlorophenol	-	-	-	-	-
		2,3,5-Trichlorophenol	-	-	-	-	-
		2,4,5-Trichlorophenol	-	-	-	-	-
		2,4,6-Trichlorophenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		2,4-Dimethyl phenol	0 / 1	0 / 1	-	-	-
		2,4-Dinitrophenol	0 / 1	0 / 1	-	-	-
		2,4-Dichlorophenol	0 / 1	0 / 1	-	-	-
		2,6-Dichlorophenol	-	-	-	-	-
		4,6-Dinitro-o-cresol	0 / 1	0 / 1	-	0 / 1	0 / 1
		2-Chlorophenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		4-Chloro-3-methylphenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		4-Nitrophenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		m-Cresol	-	-	-	-	-
		o-Cresol	-	-	-	-	-
		p-Cresol	-	-	-	-	-
		Pentachlorophenol	0 / 1	0 / 1	-	0 / 1	0 / 1
		Phenol	0 / 1	0 / 1	-	0 / 1	0 / 1
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2,3,5-Tetrachlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2,4,5-Tetrachlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2,3-Trichlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		1,2,4-Trichlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		2,4,5-Trichlorotoluene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Hexachlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Hexachlorobutadiene	0 / 1	0 / 1	-	0 / 1	0 / 1
		Hexachlorocyclopentadiene	-	-	-	-	-
		Hexachloroethane	0 / 1	0 / 1	-	0 / 1	0 / 1
		Octachlorostyrene	-	-	-	-	-
		Pentachlorobenzene	0 / 1	0 / 1	-	0 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lambton Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Ash Filter Plant	Boiler Blowdown	Lake Lambton	Outfall
ANALYTICAL TEST GROUP		PARAMETERS					
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	-	-	-	-	-
		Octachlorodibenzo-p-dioxin	-	-	-	-	-
		Octachlorodibenzofuran	-	-	-	-	-
		Total heptachlorinated dibenzo-p-dioxins	-	-	-	-	-
		Total heptachlorinated dibenzofurans	-	-	-	-	-
		Total hexachlorinated dibenzo-p-dioxins	-	-	-	-	-
		Total hexachlorinated dibenzofurans	-	-	-	-	-
		Total pentachlorinated dibenzo-p-dioxins	-	-	-	-	-
		Total pentachlorinated dibenzofurans	-	-	-	-	-
		Total tetrachlorinated dibenzo-p-dioxins	-	-	-	-	-
		Total tetrachlorinated dibenzofurans	-	-	-	-	-
25	Solvent Extractables	Oil and grease	1/1	0/1	-	1/1	1/1
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/1	0/1	-	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lennox Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Oily Water Treatment Pond Discharge	West Interceptor	East Interceptor	Air Pre-heaters Wash Lagoon
ANALYTICAL TEST GROUP		PARAMETERS					
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/2	2/2	2/2	1/2	2/2
2	Total cyanide	Total cyanide	0/2	0/2	0/2	0/2	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	8	7-8	6-7	7
4a	Nitrogen	Ammonia plus Ammonium	0/2	0/2	0/2	0/2	1/2
		Total Kjeldahl nitrogen	0/2	2/2	0/2	0/2	1/2
4b		Nitrate + Nitrite	2/2	2/2	2/2	2/2	2/2
5a	Organic carbon	Dissolved organic carbon (DOC)	2/2	2/2	2/2	2/2	2/2
5b		Total organic carbon (TOC)	0/2	0/2	0/2	0/2	0/2
6	Total phosphorus	Total phosphorus	1/2	0/2	0/2	0/2	0/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0/2	0/2	0/2	1/2	0/2
		Volatile suspended solids (VSS)	0/2	0/2	0/2	0/2	0/2
9	Total metals	Aluminum	0/2	0/2	2/2	0/2	0/2
		Beryllium	1/2	1/2	0/2	1/2	1/2
		Cadmium	0/2	1/2	0/2	0/2	0/2
		Chromium	0/2	0/2	0/2	0/2	0/2
		Cobalt	0/2	0/2	1/2	0/2	0/2
		Copper	0/2	0/2	1/2	0/2	0/2
		Lead	0/2	0/2	0/2	0/2	0/2
		Molybdenum	0/2	0/2	0/2	0/2	0/2
		Nickel	0/2	0/2	0/2	0/2	1/2
		Silver	0/2	0/2	0/2	0/2	0/2
		Thallium	0/2	0/2	0/2	0/2	0/2
		Vanadium	0/2	0/2	0/2	0/2	2/2
		Zinc	1/2	1/2	2/2	2/2	0/2
10	Hydrides	Antimony	0/2	0/2	0/2	0/2	0/2
		Arsenic	0/2	0/2	0/2	0/2	0/2
		Selenium	0/2	0/2	0/2	0/2	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lennox Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Oily Water Treatment Pond Discharge	West Interceptor	East Interceptor	Air Pre-heaters Wash Lagoon
ANALYTICAL TEST GROUP		PARAMETERS					
12	Mercury	Mercury	1/2	0/2	0/2	0/2	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	2/2	2/2	2/2	1/2	2/2
15	Sulphide	Sulphide	0/2	0/2	0/2	0/2	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/2	0/2	0/2	0/2	0/2
		1,1,2-Trichloroethane	0/2	0/2	0/2	0/2	0/2
		1,1-Dichloroethane	0/2	0/2	0/2	0/2	0/2
		1,1-Dichloroethylene	0/2	0/2	0/2	0/2	0/2
		1,2-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/2	0/2	0/2	0/2	0/2
		1,2-Dichloropropane	0/2	0/2	0/2	0/2	0/2
		1,3-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,4-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2
		Bromoform	0/2	0/2	0/2	0/2	0/2
		Bromomethane	0/2	0/2	0/2	0/2	0/2
		Carbon tetrachloride	0/2	0/2	0/2	0/2	0/2
		Chlorobenzene	0/2	0/2	0/2	0/2	0/2
		Chloroform	0/2	0/2	0/2	0/2	0/2
		Chloromethane	0/2	0/2	0/2	0/2	0/2
		Cis-1,3-Dichloropropylene	0/2	0/2	0/2	0/2	0/2
		Dibromochloromethane	0/2	0/2	0/2	0/2	0/2
		Ethylene dibromide	0/2	0/2	0/2	0/2	0/2
		Methylene chloride	0/2	1/2	1/2	1/2	2/2
		Tetrachloroethylene (Perchloroethylene)	0/2	0/2	0/2	0/2	0/2
		Trans-1,2-Dichloroethylene	0/2	0/2	0/2	0/2	0/2
		Trans-1,3-Dichloropropylene	0/2	0/2	0/2	0/2	0/2
		Trichloroethylene	0/2	0/2	0/2	0/2	0/2
		Trichlorofluoromethane	0/2	0/2	1/2	0/2	1/2
		Vinyl chloride (Chloroethylene)	0/2	0/2	0/2	0/2	0/2
17	Volatiles, Non-Halogenated	Benzene	0/2	0/2	0/2	0/2	0/2
		Styrene	0/2	0/2	0/2	0/2	0/2
		Toluene	0/2	0/2	0/2	0/2	0/2
		o-Xylene	0/2	0/2	0/2	0/2	0/2
		m-Xylene and p-Xylene	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Lennox Thermal Generating Station				
	NAME OF EFFLUENT STREAM:	Intake	Oily Water Treatment Pond Discharge	West Interceptor	East Interceptor	Air Pre-heaters Wash Lagoon
ANALYTICAL TEST GROUP	PARAMETERS					
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2	0/2	0/2	0/2
	5-nitro Acenaphthene	-	-	-	-	-
	Acenaphthylene	0/2	0/2	0/2	0/2	0/2
	Anthracene	0/2	0/2	0/2	0/2	0/2
	Benz(a)anthracene	0/2	0/2	0/2	0/2	0/2
	Benzo(a)pyrene	0/2	0/2	0/2	0/2	0/2
	Benzo(b)fluoranthene	0/2	0/2	0/2	0/2	0/2
	Benzo(g,h,i)perylene	0/2	0/2	0/2	0/2	0/2
	Benzo(k)fluoranthene	0/2	0/2	0/2	0/2	0/2
	Biphenyl	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2
	1-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2
	2-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2
	Chrysene	0/2	0/2	0/2	0/2	0/2
	Dibenz(a,h)anthracene	0/2	0/2	0/2	0/2	0/2
	Fluoranthene	0/2	0/2	0/2	0/2	0/2
	Fluorene	0/2	0/2	0/2	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2	0/2	0/2	0/2
	Indole	0/2	0/2	0/2	0/2	0/2
	1-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2
	Naphthalene	0/2	0/2	0/2	0/2	0/2
	Perylene	0/2	0/2	0/2	0/2	0/2
	Phenanthrene	0/2	0/2	0/2	0/2	0/2
	Pyrene	0/2	0/2	0/2	0/2	0/2
	Benzyl butyl phthalate	0/2	0/2	0/2	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2	0/2	0/2	0/2
	Di-n-butyl phthalate	0/2	0/2	0/2	0/2	0/2
	4-Bromophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethyl)ether	0/2	0/2	0/2	0/2	0/2
	Diphenyl ether	-	-	-	-	-
	2,4-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2
	2,6-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2	0/2	0/2	0/2
	Diphenylamine	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodiphenylamine	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lennox Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Oily Water Treatment Pond Discharge	West Interceptor	East Interceptor	Air Pre-heaters Wash Lagoon
ANALYTICAL TEST GROUP		PARAMETERS					
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2
		2,3,4,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2
		2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2
		2,3,4-Trichlorophenol	0/2	0/2	0/2	0/2	0/2
		2,3,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2
		2,4,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2
		2,4,6-Trichlorophenol	0/2	0/2	0/2	0/2	0/2
		2,4-Dimethyl phenol	0/2	0/2	0/2	0/2	0/2
		2,4-Dinitrophenol	0/2	0/2	0/2	0/2	0/2
		2,4-Dichlorophenol	0/2	0/2	0/2	0/2	0/2
		2,6-Dichlorophenol	0/2	0/2	0/2	0/2	0/2
		4,6-Dinitro-o-cresol	0/2	0/2	0/2	0/2	0/2
		2-Chlorophenol	0/2	0/2	0/2	0/2	0/2
		4-Chloro-3-methylphenol	0/2	0/2	0/2	0/2	0/2
		4-Nitrophenol	0/2	0/2	0/2	0/2	0/2
		m-Cresol	0/2	0/2	0/2	0/2	0/2
		o-Cresol	0/2	0/2	0/2	0/2	0/2
		p-Cresol	0/2	0/2	0/2	0/2	0/2
		Pentachlorophenol	0/2	0/2	0/2	0/2	0/2
		Phenol	0/2	0/2	0/2	0/2	0/2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,2,3,5-Tetrachlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,2,4,5-Tetrachlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,2,3-Trichlorobenzene	0/2	0/2	0/2	0/2	0/2
		1,2,4-Trichlorobenzene	0/2	0/2	0/2	0/2	0/2
		2,4,5-Trichlorotoluene	0/2	0/2	0/2	0/2	0/2
		Hexachlorobenzene	0/2	0/2	0/2	0/2	0/2
		Hexachlorobutadiene	0/2	0/2	0/2	0/2	0/2
		Hexachlorocyclopentadiene	-	-	-	-	-
		Hexachloroethane	0/2	0/2	0/2	0/2	0/2
		Octachlorostyrene	-	-	-	-	-
		Pentachlorobenzene	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Lennox Thermal Generating Station				
		NAME OF EFFLUENT STREAM:	Intake	Oily Water Treatment Pond Discharge	West Interceptor	East Interceptor	Air Pre-heaters Wash Lagoon
ANALYTICAL TEST GROUP		PARAMETERS					
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2
		Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2
		Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2
		Total heptachlorinated dibenzo-p-dioxins	0/1	0/2	0/2	0/2	0/2
		Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2
		Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2
		Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2
		Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2
		Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2
		Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2
		Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2
25	Solvent Extractables	Oil and grease	0/2	0/2	0/2	0/2	0/2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Nanticoke Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Lagoon Effluent	Boiler Blowdown	Unit 2 Floor Drain Sump	North Yard Drain	Coal Pile Runoff Overflow	Water Treatment Plant Neutralization Sump	Condensor Cooling Water
ANALYTICAL TEST GROUP		PARAMETERS								
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3 / 3	1 / 3	1 / 3	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1
2	Total cyanide	Total cyanide	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 2	-	-
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	11	6-8	7-8	8	8	-	-
4a	Nitrogen	Ammonia plus Ammonium	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	1 / 1	0 / 1
		Total Kjeldahl nitrogen	0 / 3	1 / 3	0 / 3	0 / 3	0 / 2	0 / 2	-	-
4b		Nitrate + Nitrite	3 / 3	3 / 3	0 / 3	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1
5a	Organic carbon	Dissolved organic carbon (DOC)	3 / 3	2 / 3	2 / 3	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1
5b		Total organic carbon (TOC)	1 / 3	1 / 3	0 / 3	0 / 3	1 / 2	1 / 2	0 / 1	0 / 1
6	Total phosphorus	Total phosphorus	0 / 3	0 / 3	1 / 3	0 / 2	0 / 2	1 / 2	0 / 1	0 / 1
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0 / 3	0 / 3	0 / 3	2 / 2	0 / 2	1 / 2	1 / 1	0 / 1
		Volatile suspended solids (VSS)	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	2 / 2	-	-
9	Total metals	Aluminum	3 / 3	3 / 3	2 / 3	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1
		Beryllium	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Cadmium	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Chromium	1 / 3	3 / 3	1 / 3	2 / 2	1 / 2	0 / 2	1 / 1	0 / 1
		Cobalt	1 / 3	1 / 3	1 / 3	2 / 3	1 / 3	1 / 3	0 / 1	0 / 1
		Copper	2 / 3	2 / 3	3 / 3	2 / 2	1 / 2	2 / 2	1 / 1	0 / 1
		Lead	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Molybdenum	1 / 3	3 / 3	1 / 3	2 / 2	1 / 2	1 / 2	1 / 1	0 / 1
		Nickel	0 / 3	0 / 3	1 / 3	0 / 2	0 / 2	0 / 2	1 / 1	0 / 1
		Silver	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-
		Thallium	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Vanadium	1 / 3	3 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Zinc	2 / 3	3 / 3	3 / 3	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1
10	Hydrides	Antimony	0 / 3	3 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1
		Arsenic	0 / 3	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	1 / 1	0 / 1
		Selenium	0 / 3	3 / 3	0 / 3	0 / 2	0 / 2	1 / 2	0 / 1	0 / 1
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0 / 1	1 / 1	0 / 1	-	-	-	1 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Nanticoke Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Lagoon Effluent	Boiler Blowdown	Unit 2 Floor Drain Sump	North Yard Drain	Coal Pile Runoff Overflow	Water Treatment Plant Neutralization Sump	Condensor Cooling Water
ANALYTICAL TEST GROUP		PARAMETERS								
12	Mercury	Mercury	0/3	0/3	0/3	0/2	0/2	0/2	0/1	0/1
14	Phenolics (4AAP)	Phenolics (4AAP)	0/3	0/3	1/3	0/2	0/2	1/2	1/1	0/1
15	Sulphide	Sulphide	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,1,2-Trichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,1-Dichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,1-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,2-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,2-Dichloropropane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,3-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		1,4-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Bromoform	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Bromomethane	0/2	0/2	0/2	0/2	0/2	0/2	-	-
		Carbon tetrachloride	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Chlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Chloroform	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Chloromethane	0/2	0/2	0/2	0/2	0/2	0/2	-	-
		Cis-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Dibromochloromethane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Ethylene dibromide	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Methylene chloride	0/3	0/3	0/2	0/2	0/2	0/2	-	1/1
		Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Trans-1,2-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Trans-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Trichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	-	-
		Trichlorofluoromethane	0/2	0/2	0/2	0/2	0/2	0/2	-	-
		Vinyl chloride (Chloroethylene)	0/2	0/2	0/2	0/2	0/2	0/2	-	-
17	Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		Styrene	0/2	0/2	0/2	0/2	0/2	0/2	-	0/1
		Toluene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		o-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
		m-Xylene and p-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Nanticoke Thermal Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Ash Lagoon Effluent	Boiler Blowdown	Unit 2 Floor Drain Sump	North Yard Drain	Coal Pile Runoff Overflow	Water Treatment Plant Neutralization Sump	Condensor Cooling Water
ANALYTICAL TEST GROUP	PARAMETERS								
19 Extractables, Base Neutral	Acenaphthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-
	Acenaphthylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benz(a)anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(a)pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(b)fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(g,h,i)perylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(k)fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Biphenyl	-	-	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	1-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	2-Chloronaphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Chrysene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Dibenz(a,h)anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Fluorene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Indeno(1,2,3-cd)pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Indole	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	1-Methylnaphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	Naphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Perylene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	Phenanthrene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	Pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzyl butyl phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-ethylhexyl) phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Di-n-butyl phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Bromophenyl phenyl ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Chlorophenyl phenyl ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroisopropyl)ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroethyl)ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Diphenyl ether	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,6-Dinitrotoluene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroethoxy)methane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Diphenylamine	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	N-Nitrosodiphenylamine	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	N-Nitrosodi-n-propylamine	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Nanticoke Thermal Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Ash Lagoon Effluent	Boiler Blowdown	Unit 2 Floor Drain Sump	North Yard Drain	Coal Pile Runoff Overflow	Water Treatment Plant Neutralization Sump	Condensor Cooling Water
ANALYTICAL TEST GROUP	PARAMETERS								
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,3,4,6-Tetrachlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	2,3,4-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	2,3,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	2,4,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	2,4,6-Trichlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,4-Dimethyl phenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,4-Dinitrophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,4-Dichlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,6-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	4,6-Dinitro-o-cresol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2-Chlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Chloro-3-methylphenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Nitrophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	m-Cresol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	o-Cresol	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	p-Cresol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Pentachlorophenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Phenol	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	1,2,4,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	1,2,3-Trichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	1,2,4-Trichlorobenzene	2/3	2/3	2/2	2/2	2/2	2/2	-	0/1
	2,4,5-Trichlorotoluene	0/3	0/3	0/2	0/2	0/2	2/2	-	0/1
	Hexachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Hexachlorobutadiene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Hexachlorocyclopentadiene	0/2	0/2	0/2	0/2	0/2	0/2	-	0/1
	Hexachloroethane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Octachlorostyrene	-	-	-	-	-	-	-	-
	Pentachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Nanticoke Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Lagoon Effluent	Boiler Blowdown	Unit 2 Floor Drain Sump	North Yard Drain	Coal Pile Runoff Overflow	Water Treatment Plant Neutralization Sump	Condensor Cooling Water
ANALYTICAL TEST GROUP		PARAMETERS								
24	Chlorinated Dibenzo-p dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Octachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Octachlorodibenzofuran	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total heptachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total heptachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total hexachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total hexachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total pentachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total pentachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total tetrachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total tetrachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
25	Solvent Extractables	Oil and grease	0 / 3	0 / 3	0 / 2	0 / 2	1 / 2	1 / 2	-	0 / 1
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 2	-	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	R.L. Hearn TGS	
		NAME OF EFFLUENT STREAM:	Intake	Drainage Collection Sump
ANALYTICAL TEST GROUP		PARAMETERS		
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	2/2	2/2
2	Total cyanide	Total cyanide	0/2	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	7
4a	Nitrogen	Ammonia plus Ammonium	0/2	1/2
		Total Kjeldahl nitrogen	1/2	2/2
4b		Nitrate + Nitrite	2/2	2/2
5a	Organic carbon	Dissolved organic carbon (DOC)	2/2	2/2
5b		Total organic carbon (TOC)	0/2	2/2
6	Total phosphorus	Total phosphorus	0/2	2/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	2/2	2/2
		Volatile suspended solids (VSS)	0/2	0/2
9	Total metals	Aluminum	1/2	2/2
		Beryllium	0/2	0/2
		Cadmium	0/2	0/2
		Chromium	0/2	0/2
		Cobalt	0/2	0/2
		Copper	1/2	0/2
		Lead	0/2	0/2
		Molybdenum	2/2	0/2
		Nickel	0/2	0/2
		Silver	0/2	0/2
		Thallium	0/2	0/2
		Vanadium	0/2	0/2
		Zinc	0/2	2/2
10	Hydrides	Antimony	0/2	0/2
		Arsenic	0/2	0/2
		Selenium	0/2	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	R.L. Hearn TGS	
		NAME OF EFFLUENT STREAM:	Intake	Drainage Collection Sump
ANALYTICAL TEST GROUP		PARAMETERS		
12	Mercury	Mercury	1/2	2/2
14	Phenolics (4AAP)	Phenolics (4AAP)	1/2	2/2
15	Sulphide	Sulphide	0/2	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/2	0/2
		1,1,2-Trichloroethane	0/2	0/2
		1,1-Dichloroethane	0/2	0/2
		1,1-Dichloroethylene	0/2	0/2
		1,2-Dichlorobenzene	0/2	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/2	0/2
		1,2-Dichloropropane	0/2	0/2
		1,3-Dichlorobenzene	0/2	0/2
		1,4-Dichlorobenzene	0/2	0/2
		Bromoform	0/2	0/2
		Bromomethane	0/2	0/2
		Carbon tetrachloride	0/2	0/2
		Chlorobenzene	0/2	0/2
		Chloroform	0/2	0/2
		Chloromethane	0/2	0/2
		Cis-1,3-Dichloropropylene	0/2	0/2
		Dibromochloromethane	0/2	0/2
		Ethylene dibromide	0/2	0/2
		Methylene chloride	1/2	2/2
		Tetrachloroethylene (Perchloroethylene)	0/2	0/2
		Trans-1,2-Dichloroethylene	0/2	0/2
		Trans-1,3-Dichloropropylene	0/2	0/2
		Trichloroethylene	0/2	0/2
		Trichlorofluoromethane	0/2	0/2
		Vinyl chloride (Chloroethylene)	0/2	0/2
17	Volatiles, Non-Halogenated	Benzene	0/2	0/2
		Styrene	0/2	0/2
		Toluene	0/2	0/2
		o-Xylene	0/2	0/2
		m-Xylene and p-Xylene	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	R.L. Hearn TGS	
	NAME OF EFFLUENT STREAM:	Intake	Drainage Collection Sump
ANALYTICAL TEST GROUP	PARAMETERS		
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2
	5-nitro Acenaphthene	-	-
	Acenaphthylene	0/2	0/2
	Anthracene	0/2	0/2
	Benz(a)anthracene	0/2	0/2
	Benzo(a)pyrene	0/2	0/2
	Benzo(b)fluoranthene	0/2	0/2
	Benzo(g,h,i)perylene	0/2	0/2
	Benzo(k)fluoranthene	0/2	0/2
	Biphenyl	0/2	0/2
	Camphene	0/2	0/2
	1-Chloronaphthalene	0/2	0/2
	2-Chloronaphthalene	0/2	0/2
	Chrysene	0/2	0/2
	Dibenz(a,h)anthracene	0/2	0/2
	Fluoranthene	0/2	0/2
	Fluorene	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2
	Indole	0/2	0/2
	1-Methylnaphthalene	0/2	0/2
	2-Methylnaphthalene	0/2	1/2
	Naphthalene	0/2	1/2
	Perylene	0/2	0/2
	Phenanthrene	0/2	0/2
	Pyrene	0/2	0/2
	Benzyl butyl phthalate	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2
	Di-n-butyl phthalate	0/2	0/2
	4-Bromophenyl phenyl ether	0/2	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2
	Bis(2-chloroethyl)ether	0/2	0/2
	Diphenyl ether	-	-
	2,4-Dinitrotoluene	0/2	0/2
	2,6-Dinitrotoluene	0/2	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2
	Diphenylamine	0/2	0/2
	N-Nitrosodiphenylamine	0/2	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	R.L. Hearn TGS	
		NAME OF EFFLUENT STREAM:	Intake	Drainage Collection Sump
ANALYTICAL TEST GROUP		PARAMETERS		
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 2	0 / 2
		2,3,4,6-Tetrachlorophenol	0 / 2	0 / 2
		2,3,5,6-Tetrachlorophenol	0 / 2	0 / 2
		2,3,4-Trichlorophenol	0 / 2	0 / 2
		2,3,5-Trichlorophenol	0 / 2	0 / 2
		2,4,5-Trichlorophenol	0 / 2	0 / 2
		2,4,6-Trichlorophenol	0 / 2	0 / 2
		2,4-Dimethyl phenol	0 / 2	0 / 2
		2,4-Dinitrophenol	0 / 2	0 / 2
		2,4-Dichlorophenol	0 / 2	0 / 2
		2,6-Dichlorophenol	0 / 2	0 / 2
		4,6-Dinitro-o-cresol	0 / 2	0 / 2
		2-Chlorophenol	0 / 2	0 / 2
		4-Chloro-3-methylphenol	0 / 2	0 / 2
		4-Nitrophenol	0 / 2	0 / 2
		m-Cresol	0 / 2	0 / 2
		o-Cresol	0 / 2	0 / 2
		p-Cresol	0 / 2	0 / 2
		Pentachlorophenol	0 / 2	0 / 2
		Phenol	0 / 2	0 / 2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 2	0 / 2
		1,2,3,5-Tetrachlorobenzene	0 / 2	0 / 2
		1,2,4,5-Tetrachlorobenzene	0 / 2	0 / 2
		1,2,3-Trichlorobenzene	0 / 2	0 / 2
		1,2,4-Trichlorobenzene	0 / 2	0 / 2
		2,4,5-Trichlorotoluene	0 / 2	0 / 2
		Hexachlorobenzene	0 / 2	0 / 2
		Hexachlorobutadiene	0 / 2	0 / 2
		Hexachlorocyclopentadiene	0 / 2	0 / 2
		Hexachloroethane	0 / 2	0 / 2
		Octachlorostyrene	-	-
		Pentachlorobenzene	0 / 2	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	R.L. Hearn TGS	
		NAME OF EFFLUENT STREAM:	Intake	Drainage Collection Sump
ANALYTICAL TEST GROUP		PARAMETERS		
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0 / 2	0 / 2
		Octachlorodibenzo-p-dioxin	0 / 2	1 / 2
		Octachlorodibenzofuran	0 / 2	0 / 2
		Total heptachlorinated dibenzo-p-dioxins	0 / 2	0 / 2
		Total heptachlorinated dibenzofurans	0 / 2	0 / 2
		Total hexachlorinated dibenzo-p-dioxins	0 / 2	0 / 2
		Total hexachlorinated dibenzofurans	0 / 2	0 / 2
		Total pentachlorinated dibenzo-p-dioxins	0 / 2	0 / 2
		Total pentachlorinated dibenzofurans	0 / 2	0 / 2
		Total tetrachlorinated dibenzo-p-dioxins	0 / 2	0 / 2
		Total tetrachlorinated dibenzofurans	0 / 2	0 / 2
25	Solvent Extractables	Oil and grease	1 / 2	2 / 2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	1 / 2	1 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Thunder Bay Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Transport Water Treatment System	Ash Transport Water Treatment System Overflow	Water Treatment Plant Neutralization Sump	Oily Water Separator	Coal Pile Runoff Pond	Boiler Blowdown	Condensor Cooling Water Outfall
ANALYTICAL TEST GROUP		PARAMETERS								
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3 / 3	3 / 3	2 / 2	3 / 3	2 / 2	2 / 2	1 / 1	1 / 1
2	Total cyanide	Total cyanide	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	0 / 2	-	0 / 1
3	Hydrogen ion (pH)	Hydrogen ion (pH)	6 - 7	7	7	3 - 11	6 - 7	7	8	6
4a	Nitrogen	Ammonia plus Ammonium	0 / 3	0 / 3	0 / 2	2 / 3	2 / 3	1 / 2	1 / 2	0 / 1
		Total Kjeldahl nitrogen	3 / 3	2 / 3	2 / 2	2 / 3	3 / 3	0 / 2	-	-
4b		Nitrate + Nitrite	1 / 3	1 / 3	0 / 2	3 / 3	0 / 3	0 / 2	0 / 1	1 / 1
5a	Organic carbon	Dissolved organic carbon (DOC)	3 / 3	3 / 3	2 / 2	3 / 3	3 / 3	2 / 2	0 / 1	1 / 1
5b		Total organic carbon (TOC)	3 / 3	3 / 3	2 / 2	3 / 3	3 / 3	2 / 2	0 / 1	1 / 1
6	Total phosphorus	Total phosphorus	1 / 3	2 / 3	2 / 2	0 / 3	2 / 2	0 / 2	0 / 1	0 / 1
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	3 / 3	3 / 3	2 / 2	1 / 3	3 / 3	1 / 2	0 / 1	1 / 1
		Volatile suspended solids (VSS)	0 / 3	0 / 2	2 / 2	1 / 2	1 / 2	2 / 2	-	-
9	Total metals	Aluminum	2 / 3	3 / 3	2 / 2	2 / 3	2 / 2	2 / 2	0 / 1	0 / 1
		Beryllium	2 / 3	1 / 3	2 / 2	2 / 3	1 / 2	1 / 2	0 / 1	0 / 1
		Cadmium	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
		Chromium	1 / 3	2 / 3	2 / 2	2 / 3	2 / 2	1 / 2	0 / 1	0 / 1
		Cobalt	1 / 3	0 / 3	1 / 2	2 / 3	1 / 2	0 / 2	0 / 1	0 / 1
		Copper	1 / 3	1 / 3	2 / 2	2 / 3	2 / 2	1 / 2	0 / 1	0 / 1
		Lead	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 1	0 / 1	0 / 1
		Molybdenum	1 / 3	0 / 3	1 / 2	2 / 3	1 / 2	1 / 2	0 / 1	0 / 1
		Nickel	1 / 3	2 / 3	1 / 2	2 / 3	1 / 2	1 / 2	0 / 1	0 / 1
		Silver	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
		Thallium	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
		Vanadium	1 / 3	1 / 3	1 / 2	0 / 3	0 / 2	1 / 2	0 / 1	0 / 1
		Zinc	-	-	-	-	-	-	-	-
10	Hydrides	Antimony	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
		Arsenic	0 / 3	1 / 3	2 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
		Selenium	0 / 3	0 / 3	0 / 2	0 / 3	0 / 2	0 / 2	0 / 1	0 / 1
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0 / 1	0 / 1	-	0 / 1	1 / 1	-	0 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Thunder Bay Thermal Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Ash Transport Water Treatment System	Ash Transport Water Treatment System Overflow	Water Treatment Plant Neutralization Sump	Oily Water Separator	Coal Pile Runoff Pond	Boiler Blowdown	Condensor Cooling Water Outfall
ANALYTICAL TEST GROUP	PARAMETERS								
12 Mercury	Mercury	0/3	0/3	1/2	2/3	0/2	2/2	0/1	0/1
14 Phenolics (4AAP)	Phenolics (4AAP)	3/3	2/3	2/2	1/3	3/3	1/2	1/1	1/1
15 Sulphide	Sulphide	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
16 Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,1,2-Trichloroethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,1-Dichloroethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,1-Dichloroethylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,2-Dichlorobenzene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,2-Dichloropropane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,3-Dichlorobenzene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	1,4-Dichlorobenzene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Bromoform	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Bromomethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Carbon tetrachloride	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Chlorobenzene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Chloroform	3/3	0/3	1/2	2/2	1/3	0/2	-	1/1
	Chloromethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Cis-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Dibromochloromethane	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Ethylene dibromide	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Methylene chloride	2/3	1/3	1/2	1/2	1/3	1/2	-	1/1
	Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Trans-1,2-Dichloroethylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Trans-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Trichloroethylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Trichlorofluoromethane	0/3	0/3	0/2	0/2	0/3	0/2	-	-
	Vinyl chloride (Chloroethylene)	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
17 Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	Styrene	0/3	0/3	0/2	0/2	0/3	0/2	-	-
	Toluene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	o-Xylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1
	m-Xylene and p-Xylene	0/3	0/3	0/2	0/2	0/3	0/2	-	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Thunder Bay Thermal Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Ash Transport Water Treatment System	Ash Transport Water Treatment System Overflow	Water Treatment Plant Neutralization Sump	Oily Water Separator	Coal Pile Runoff Pond	Boiler Blowdown	Condensor Cooling Water Outfall
ANALYTICAL TEST GROUP	PARAMETERS								
19 Extractables, Base Neutral	Acenaphthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	5-nitro Acenaphthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Acenaphthylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benz(a)anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(a)pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(b)fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(g,h,i)perylene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzo(k)fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Biphenyl	-	-	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	1-Chloronaphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2-Chloronaphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Chrysene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Dibenz(a,h)anthracene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Fluoranthene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Fluorene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Indeno(1,2,3-cd)pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Indole	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	1-Methylnaphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	Naphthalene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Perylene	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	Phenanthrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Pyrene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Benzyl butyl phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-ethylhexyl) phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Di-n-butyl phthalate	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Bromophenyl phenyl ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	4-Chlorophenyl phenyl ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroisopropyl)ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroethyl)ether	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Diphenyl ether	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	2,6-Dinitrotoluene	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Bis(2-chloroethoxy)methane	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	Diphenylamine	0/2	0/2	0/2	0/2	0/2	0/2	-	-
	N-Nitrosodiphenylamine	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1
	N-Nitrosodi-n-propylamine	0/3	0/3	0/2	0/2	0/2	0/2	-	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Thunder Bay Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Transport Water Treatment System	Ash Transport Water Treatment System Overflow	Water Treatment Plant Neutralization Sump	Oily Water Separator	Coal Pile Runoff Pond	Boiler Blowdown	Condensor Cooling Water Outfall
ANALYTICAL TEST GROUP		PARAMETERS								
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2,3,4,6-Tetrachlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		2,3,5,6-Tetrachlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		2,3,4-Trichlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		2,3,5-Trichlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		2,4,5-Trichlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		2,4,6-Trichlorophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2,4-Dimethyl phenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2,4-Dinitrophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2,4-Dichlorophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2,6-Dichlorophenol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		4,6-Dinitro-o-cresol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		2-Chlorophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		4-Chloro-3-methylphenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		4-Nitrophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		m-Cresol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		o-Cresol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		p-Cresol	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-
		Pentachlorophenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
		Phenol	0 / 3	0 / 3	0 / 2	0 / 2	0 / 2	-	-	0 / 1
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		1,2,3,5-Tetrachlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		1,2,4,5-Tetrachlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		1,2,3-Trichlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		1,2,4-Trichlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		2,4,5-Trichlorotoluene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		Hexachlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		Hexachlorobutadiene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		Hexachlorocyclopentadiene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 3	0 / 2	-	-
		Hexachloroethane	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1
		Octachlorostyrene	-	-	-	-	-	-	-	-
		Pentachlorobenzene	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Thunder Bay Thermal Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Ash Transport Water Treatment System	Ash Transport Water Treatment System Overflow	Water Treatment Plant Neutralization Sump	Oily Water Separator	Coal Pile Runoff Pond	Boiler Blowdown	Condensor Cooling Water Outfall
ANALYTICAL TEST GROUP		PARAMETERS								
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Octachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Octachlorodibenzofuran	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total heptachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total heptachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total hexachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total hexachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total pentachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total pentachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total tetrachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
		Total tetrachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	-	-
25	Solvent Extractables	Oil and grease	2 / 3	2 / 3	2 / 2	2 / 2	3 / 3	0 / 2	-	0 / 1
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0 / 3	0 / 3	0 / 2	0 / 2	0 / 3	0 / 2	-	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	**Decew Falls HGS**		**Pine Portage HGS**		**Sir Adam Beck HGS**	
		NAME OF EFFLUENT STREAM:	Transforme Drainage Sump	Catch Basin	Intake	Drainage Sump	Intake	Drainage Sump
ANALYTICAL TEST GROUP		**PARAMETERS**						
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/1	1/1	2/2	2/2	0/2	2/2
2	Total cyanide	Total cyanide	0/1	0/1	0/2	0/2	0/2	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	7	7	8	8	8	8
4a	Nitrogen	Ammonia plus Ammonium	1/1	1/1	0/2	0/2	0/2	0/2
		Total Kjeldahl nitrogen	1/1	1/1	0/2	0/2	1/2	0/2
4b		Nitrate + Nitrite	1/1	1/1	0/2	0/2	0/2	0/2
5a	Organic carbon	Dissolved organic carbon (DOC)	1/1	1/1	2/2	2/2	2/2	2/2
5b		Total organic carbon (TOC)	1/1	1/1	2/2	2/2	0/2	2/2
6	Total phosphorus	Total phosphorus	0/1	0/1	0/2	0/2	0/2	0/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	1/1	1/1	0/2	0/2	0/2	1/2
		Volatile suspended solids (VSS)	0/1	0/1	0/2	0/2	0/2	0/2
9	Total metals	Aluminum	1/1	1/1	1/2	2/2	2/2	2/2
		Beryllium	0/1	0/1	1/2	1/2	0/2	0/2
		Cadmium	1/1	1/1	0/2	0/2	1/2	0/2
		Chromium	0/1	0/1	1/2	2/2	0/2	1/2
		Cobalt	0/1	0/1	0/2	0/5	0/2	1/2
		Copper	1/1	1/1	1/2	1/2	0/2	1/2
		Lead	0/1	0/1	0/2	0/2	0/2	0/2
		Molybdenum	0/1	1/1	1/2	2/2	1/2	2/2
		Nickel	0/1	0/1	1/2	2/2	0/2	0/2
		Silver	0/1	0/1	0/2	0/2	0/2	0/2
		Thallium	0/1	0/1	0/2	0/2	0/2	0/2
		Vanadium	0/1	0/1	0/2	1/2	0/2	0/2
		Zinc	1/1	1/1	1/2	2/2	2/2	1/2
10	Hydrides	Antimony	0/1	0/1	0/2	0/2	0/2	0/2
		Arsenic	1/1	1/1	0/2	0/2	0/2	0/2
		Selenium	0/1	0/1	0/2	0/2	0/2	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Decew Falls HGS		Pine Portage HGS		Sir Adam Beck HGS	
		NAME OF EFFLUENT STREAM:	Transforme Drainage Sump	Catch Basin	Intake	Drainage Sump	Intake	Drainage Sump
ANALYTICAL TEST GROUP		PARAMETERS						
12	Mercury	Mercury	0 / 1	0 / 1	1 / 2	0 / 2	0 / 2	0 / 2
14	Phenolics (4AAP)	Phenolics (4AAP)	1 / 1	1 / 1	0 / 2	1 / 2	0 / 2	0 / 2
15	Sulphide	Sulphide	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,1,2-Trichloroethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,1-Dichloroethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,1-Dichloroethylene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2-Dichlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2-Dichloroethane (Ethylene dichloride)	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2-Dichloropropane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,3-Dichlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,4-Dichlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Bromoform	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Bromomethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Carbon tetrachloride	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Chlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Chloroform	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Chloromethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Cis-1,3-Dichloropropylene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Dibromochloromethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Ethylene dibromide	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Methylene chloride	1 / 1	1 / 1	0 / 2	0 / 2	1 / 2	2 / 2
		Tetrachloroethylene (Perchloroethylene)	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Trans-1,2-Dichloroethylene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Trans-1,3-Dichloropropylene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Trichloroethylene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Trichlorofluoromethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Vinyl chloride (Chloroethylene)	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
17	Volatiles, Non-Halogenated	Benzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Styrene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Toluene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		o-Xylene	1 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		m-Xylene and p-Xylene	1 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Decew Falls HGS		Pine Portage HGS		Sir Adam Beck HGS	
	NAME OF EFFLUENT STREAM:	Transformer Drainage Sump	Catch Basin	Intake	Drainage Sump	Intake	Drainage Sump
ANALYTICAL TEST GROUP	PARAMETERS						
19 Extractables, Base Neutral	Acenaphthene	0/1	0/1	0/2	0/2	0/2	0/2
	5-nitro Acenaphthene	-	-	-	-	-	-
	Acenaphthylene	0/1	0/1	0/2	0/2	0/2	0/2
	Anthracene	0/1	0/1	0/2	0/2	0/2	0/2
	Benz(a)anthracene	0/1	0/1	0/2	0/2	0/2	0/2
	Benzo(a)pyrene	0/1	0/1	0/2	0/2	0/2	0/2
	Benzo(b)fluoranthene	0/1	0/1	0/2	0/2	0/2	0/2
	Benzo(g,h,i)perylene	0/1	0/1	0/2	0/2	0/2	0/2
	Benzo(k)fluoranthene	0/1	0/1	0/2	0/2	0/2	0/2
	Biphenyl	-	-	-	-	-	-
	Camphene	0/1	0/1	0/2	0/2	0/2	0/2
	1-Chloronaphthalene	0/1	0/1	0/2	0/2	0/2	0/2
	2-Chloronaphthalene	0/1	0/1	0/2	0/2	0/2	0/2
	Chrysene	0/1	0/1	0/2	0/2	0/2	0/2
	Dibenz(a,h)anthracene	0/1	0/1	0/2	0/2	0/2	0/2
	Fluoranthene	0/1	0/1	0/2	0/2	0/2	0/2
	Fluorene	0/1	0/1	0/2	0/2	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/1	0/1	0/2	0/2	0/2	0/2
	Indole	0/1	0/1	0/2	0/2	0/2	0/2
	1-Methylnaphthalene	0/1	0/1	0/2	0/2	0/2	0/2
	2-Methylnaphthalene	0/1	0/1	0/2	0/2	0/2	0/2
	Naphthalene	0/1	0/1	0/2	0/2	0/2	0/2
	Perylene	0/1	0/1	0/2	0/2	0/2	0/2
	Phenanthrene	0/1	0/1	0/2	0/2	0/2	0/2
	Pyrene	0/1	0/1	0/2	0/2	0/2	0/2
	Benzyl butyl phthalate	0/1	0/1	0/2	0/2	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/1	0/1	0/2	0/2	0/2	0/2
	Di-n-butyl phthalate	0/1	0/1	0/2	0/2	0/2	0/2
	4-Bromophenyl phenyl ether	0/1	0/1	0/2	0/2	0/2	0/2
	4-Chlorophenyl phenyl ether	0/1	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/1	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroethyl)ether	0/1	0/1	0/2	0/2	0/2	0/2
	Diphenyl ether	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/1	0/1	0/2	0/2	0/2	0/2
	2,6-Dinitrotoluene	0/1	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroethoxy)methane	0/1	0/1	0/2	0/2	0/2	0/2
	Diphenylamine	0/1	0/1	0/2	0/2	0/2	0/2
	N-Nitrosodiphenylamine	0/1	0/1	0/2	0/2	0/2	0/2
	N-Nitrosodi-n-propylamine	0/1	0/1	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Decew Falls HGS		Pine Portage HGS		Sir Adam Beck HGS	
		NAME OF EFFLUENT STREAM:	Transforme Drainage Sump	Catch Basin	Intake	Drainage Sump	Intake	Drainage Sump
ANALYTICAL TEST GROUP		PARAMETERS						
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,3,4,6-Tetrachlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,3,5,6-Tetrachlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,3,4-Trichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,3,5-Trichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4,5-Trichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4,6-Trichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4-Dimethyl phenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4-Dinitrophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4-Dichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,6-Dichlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		4,6-Dinitro-o-cresol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2-Chlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		4-Chloro-3-methylphenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		4-Nitrophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		m-Cresol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		o-Cresol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		p-Cresol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Pentachlorophenol	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Phenol	1 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2,3,5-Tetrachlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2,4,5-Tetrachlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2,3-Trichlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		1,2,4-Trichlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		2,4,5-Trichlorotoluene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Hexachlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Hexachlorobutadiene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Hexachlorocyclopentadiene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Hexachloroethane	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Octachlorostyrene	-	-	-	-	-	-
		Pentachlorobenzene	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Decew Falls HGS		Pine Portage HGS		Sir Adam Beck HGS	
		NAME OF EFFLUENT STREAM:	Transforme Drainage Sump	Catch Basin	Intake	Drainage Sump	Intake	Drainage Sump
ANALYTICAL TEST GROUP		PARAMETERS						
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Octachlorodibenzo-p-dioxin	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Octachlorodibenzofuran	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total heptachlorinated dibenzo-p-dioxins	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total heptachlorinated dibenzofurans	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total hexachlorinated dibenzo-p-dioxins	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total hexachlorinated dibenzofurans	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total pentachlorinated dibenzo-p-dioxins	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total pentachlorinated dibenzofurans	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total tetrachlorinated dibenzo-p-dioxins	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total tetrachlorinated dibenzofurans	0 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
25	Solvent Extractables	Oil and grease	1 / 1	1 / 1	1 / 2	2 / 2	0 / 2	2 / 2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	1 / 1	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce A Nuclear Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Boiler Blowdown	Boiler Wet Lay-up	Water Treatment Plant Neutralization Sump	Radioactive Liquid Waste Management Tank	Turbine Room Sump Unit	Reactor Auxiliary Bay Sump
ANALYTICAL TEST GROUP		PARAMETERS								
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3 / 3	3 / 3	3 / 3	1 / 1	3 / 3	1 / 2	3 / 3	2 / 2
2	Total cyanide	Total cyanide	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	7 - 8	7 - 8	7 - 9	9	1 - 2	7	7	8
4a	Nitrogen	Ammonia plus Ammonium	0 / 3	0 / 3	2 / 3	1 / 1	1 / 3	2 / 3	2 / 3	2 / 2
		Total Kjeldahl nitrogen	0 / 3	1 / 3	2 / 2	1 / 1	3 / 3	3 / 3	1 / 3	2 / 2
4b		Nitrate + Nitrite	3 / 3	3 / 3	0 / 3	0 / 1	3 / 3	1 / 3	0 / 3	2 / 2
5a	Organic carbon	Dissolved organic carbon (DOC)	3 / 3	3 / 3	3 / 3	1 / 1	3 / 3	3 / 3	3 / 3	2 / 2
5b		Total organic carbon (TOC)	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	1 / 3	0 / 3	0 / 2
6	Total phosphorus	Total phosphorus	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 2	0 / 3	0 / 2
8	Suspended solids (TSS/VSS	Total suspended solids (TSS)	2 / 3	1 / 3	0 / 3	1 / 1	0 / 3	1 / 3	0 / 3	0 / 2
		Volatile suspended solids (VSS)	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
9	Total metals	Aluminum	0 / 3	2 / 3	1 / 3	0 / 1	1 / 3	2 / 3	1 / 3	1 / 2
		Beryllium	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Cadmium	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Chromium	0 / 3	2 / 3	1 / 3	0 / 1	0 / 3	0 / 3	0 / 3	1 / 2
		Cobalt	0 / 3	0 / 3	1 / 3	0 / 1	0 / 3	0 / 3	0 / 3	1 / 2
		Copper	1 / 3	0 / 3	2 / 3	1 / 1	2 / 3	3 / 3	1 / 3	1 / 2
		Lead	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Molybdenum	0 / 3	2 / 3	1 / 3	1 / 1	1 / 3	1 / 3	2 / 3	1 / 2
		Nickel	1 / 3	1 / 3	1 / 3	1 / 1	1 / 3	0 / 3	0 / 3	0 / 2
		Silver	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Thallium	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Vanadium	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Zinc	1 / 3	0 / 3	2 / 3	1 / 1	1 / 3	3 / 3	1 / 3	2 / 2
10	Hydrides	Antimony	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Arsenic	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
		Selenium	0 / 3	0 / 3	0 / 3	0 / 1	0 / 3	0 / 3	0 / 3	0 / 2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0 / 1	0 / 1	0 / 1	-	-	0 / 1	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce A Nuclear Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Boiler Blowdown	Boiler Wet Lay-up	Water Treatment Plant Neutralization Sump	Radioactive Liquid Waste Management Tank	Turbine Room Sump Unit	Reactor Auxiliary Bay Sump
ANALYTICAL TEST GROUP	PARAMETERS								
12 Mercury	Mercury	0 / 3	0 / 3	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
14 Phenolics (4AAP)	Phenolics (4AAP)	1 / 3	1 / 3	2 / 3	1 / 1	0 / 3	-	0 / 3	2 / 2
15 Sulphide	Sulphide	0 / 3	0 / 3	0 / 3	-	-	0 / 3	0 / 3	0 / 2
16 Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,1,2-Trichloroethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,1-Dichloroethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,1-Dichloroethylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,2-Dichlorobenzene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,2-Dichloroethane (Ethylene dichloride)	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,2-Dichloropropane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,3-Dichlorobenzene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	1,4-Dichlorobenzene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Bromoform	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Bromomethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Carbon tetrachloride	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Chlorobenzene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Chloroform	0 / 3	0 / 3	0 / 1	0 / 1	1 / 2	2 / 3	0 / 3	0 / 2
	Chloromethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Cis-1,3-Dichloropropylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Dibromochloromethane	0 / 3	0 / 3	0 / 1	0 / 1	2 / 2	0 / 3	0 / 3	0 / 2
	Ethylene dibromide	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Methylene chloride	1 / 3	0 / 3	0 / 1	0 / 1	1 / 2	1 / 3	0 / 3	1 / 2
	Tetrachloroethylene (Perchloroethylene)	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Trans-1,2-Dichloroethylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Trans-1,3-Dichloropropylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Trichloroethylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Trichlorofluoromethane	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Vinyl chloride (Chloroethylene)	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
17 Volatiles, Non-Halogenated	Benzene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Styrene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	Toluene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	o-Xylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2
	m-Xylene and p-Xylene	0 / 3	0 / 3	0 / 1	0 / 1	0 / 2	0 / 3	0 / 3	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce A Nuclear Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Boiler Blowdown	Boiler Wet Lay-up	Water Treatment Plant Neutralization Sump	Radioactive Liquid Waste Management Tank	Turbine Room Sump Unit	Reactor Auxiliary Bay Sump
ANALYTICAL TEST GROUP	PARAMETERS								
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-
	Acenaphthylene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Anthracene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benz(a)anthracene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benzo(a)pyrene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benzo(b)fluoranthene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benzo(g,h,i)perylene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benzo(k)fluoranthene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Biphenyl	-	-	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	1-Chloronaphthalene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	2-Chloronaphthalene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Chrysene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Dibenz(a,h)anthracene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Fluoranthene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Fluorene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Indole	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	1-Methylnaphthalene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	2-Methylnaphthalene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Naphthalene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Perylene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Phenanthrene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Pyrene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Benzyl butyl phthalate	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2	0/2	0/1	0/2	2/2	1/2	0/2
	Di-n-butyl phthalate	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	4-Bromophenyl phenyl ether	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroethyl)ether	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Diphenyl ether	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	2,6-Dinitrotoluene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Diphenylamine	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	N-Nitrosodiphenylamine	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce A Nuclear Generating Station							
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Boiler Blowdown	Boiler Wet Lay-up	Water Treatment Plant Neutralization Sump	Radioactive Liquid Waste Management Tank	Turbine Room Sump Unit	Reactor Auxiliary Bay Sump
ANALYTICAL TEST GROUP	PARAMETERS								
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,3,4,6-Tetrachlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,3,4-Trichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,3,5-Trichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,4,5-Trichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,4,6-Trichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,4-Dimethyl phenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,4-Dinitrophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,4-Dichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2,6-Dichlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	4,6-Dinitro-o-cresol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	2-Chlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	4-Chloro-3-methylphenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	4-Nitrophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	m-Cresol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	o-Cresol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	p-Cresol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	Pentachlorophenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
	Phenol	0/2	0/2	0/2	-	0/2	0/2	0/2	0/2
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	1,2,4,5-Tetrachlorobenzene	-	-	-	-	-	-	-	-
	1,2,3-Trichlorobenzene	0/3	0/3	0/2	1/1	0/2	0/3	0/3	0/2
	1,2,4-Trichlorobenzene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	2,4,5-Trichlorotoluene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	Hexachlorobenzene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	Hexachlorobutadiene	0/3	0/3	0/2	0/1	0/2	0/3	0/3	0/2
	Hexachlorocyclopentadiene	0/2	0/2	0/2	0/1	0/2	0/2	0/2	0/2
	Hexachloroethane	0/3	0/3	0/2	0/1	0/2	0/3	0/2	0/2
	Octachlorostyrene	-	-	-	-	-	-	-	-
	Pentachlorobenzene	0/3	0/3	0/2	0/1	0/5	0/3	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce A Nuclear Generating Station							
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Boiler Blowdown	Boiler Wet Lay-up	Water Treatment Plant Neutralization Sump	Radioactive Liquid Waste Management Tank	Turbine Room Sump Unit	Reactor Auxiliary Bay Sump
ANALYTICAL TEST GROUP		PARAMETERS								
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Octachlorodibenzo-p-dioxin	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Octachlorodibenzofuran	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total heptachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total heptachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total hexachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total hexachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total pentachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total pentachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total tetrachlorinated dibenzo-p-dioxins	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
		Total tetrachlorinated dibenzofurans	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2
25	Solvent Extractables	Oil and grease	1 / 3	1 / 3	0 / 3	1 / 1	1 / 3	2 / 3	2 / 3	1 / 2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0 / 3	0 / 3	0 / 2	-	0 / 2	0 / 2	0 / 3	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce A NGS (continued)					Bruce B NGS		
		NAME OF EFFLUENT STREAM:	Services Building	Water Treatment Plant	Ancillary Services Building	Accumulator Building	ECI Water Storage Tank Building	Intake	Outfall	Radioactive Liquid Waste Management
ANALYTICAL TEST GROUP		PARAMETERS								
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/2	1/2	1/2	2/2	0/2	0/1	0/1	0/2
2	Total cyanide	Total cyanide	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	8	8	7-8	8	8	8	7
4a	Nitrogen	Ammonia plus Ammonium	0/2	0/2	1/2	2/2	0/2	0/1	0/1	2/2
		Total Kjeldahl nitrogen	0/2	0/2	1/2	2/2	0/2	0/1	0/1	2/2
4b		Nitrate + Nitrite	2/2	2/2	2/2	2/2	2/2	1/1	1/1	2/2
5a	Organic carbon	Dissolved organic carbon (DOC)	2/2	2/2	2/2	2/2	2/2	1/1	1/1	2/2
5b		Total organic carbon (TOC)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
6	Total phosphorus	Total phosphorus	0/2	0/2	0/2	0/2	0/2	0/1	0/1	1/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0/2	0/2	1/2	1/2	0/2	0/1	0/1	0/2
		Volatile suspended solids (VSS)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
9	Total metals	Aluminum	1/2	1/2	0/2	2/2	2/2	1/1	1/1	2/2
		Beryllium	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Cadmium	0/2	1/2	0/2	0/2	0/2	0/1	0/1	0/2
		Chromium	1/2	0/2	0/2	0/2	0/2	1/1	1/1	0/2
		Cobalt	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Copper	1/2	0/2	0/2	0/2	0/2	1/1	1/1	0/2
		Lead	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Molybdenum	2/2	0/2	0/2	0/2	1/2	0/1	0/1	0/2
		Nickel	0/2	1/2	0/2	0/2	0/2	1/1	1/1	0/2
		Silver	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Thallium	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Vanadium	0/2	0/2	0/2	0/2	0/2	1/1	1/1	0/2
		Zinc	1/2	0/2	0/2	2/2	2/2	0/1	0/1	2/2
10	Hydrides	Antimony	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Arsenic	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Selenium	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce A NGS (continued)					Bruce B NGS		
		NAME OF EFFLUENT STREAM:	Services Building	Water Treatment Plant	Ancillary Services Building	Accumulator Building	ECI Water Storage Tank Building	Intake	Outfall	Radioactive Liquid Waste Management
ANALYTICAL TEST GROUP		PARAMETERS								
12	Mercury	Mercury	2/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	0/2	1/2	1/2	2/2	1/2	0/1	0/1	-
15	Sulphide	Sulphide	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,1,2-Trichloroethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,1-Dichloroethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,1-Dichloroethylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,2-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,2-Dichloropropane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,3-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		1,4-Dichlorobenzene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Bromoform	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Bromomethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Carbon tetrachloride	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Chlorobenzene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Chloroform	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Chloromethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Cis-1,3-Dichloropropylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Dibromochloromethane	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Ethylene dibromide	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Methylene chloride	1/2	2/2	1/2	1/2	0/2	0/1	0/1	0/2
		Tetrachloroethylene (Perchloroethylene)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Trans-1,2-Dichloroethylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Trans-1,3-Dichloropropylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Trichloroethylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Trichlorofluoromethane	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Vinyl chloride (Chloroethylene)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
17	Volatiles, Non-Halogenated	Benzene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		Styrene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Toluene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		o-Xylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2
		m-Xylene and p-Xylene	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce A NGS (continued)					Bruce B NGS		
	NAME OF EFFLUENT STREAM:	Services Building	Water Treatment Plant	Ancillary Services Building	Accumulator Building	ECI Water Storage Tank Building	Intake	Outfall	Radioactive Liquid Waste Management
ANALYTICAL TEST GROUP	PARAMETERS								
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-
	Acenaphthylene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Anthracene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benz(a)anthracene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benzo(a)pyrene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benzo(b)fluoranthene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benzo(g,h,i)perylene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benzo(k)fluoranthene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Biphenyl	-	-	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	1-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	2-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Chrysene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Dibenz(a,h)anthracene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Fluoranthene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Fluorene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Indole	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	1-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Naphthalene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Perylene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Phenanthrene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Pyrene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Benzyl butyl phthalate	0/2	0/2	0/2	0/2	0/2	-	-	2/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Di-n-butyl phthalate	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	4-Bromophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Bis(2-chloroethyl)ether	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Diphenyl ether	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	2,6-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	Diphenylamine	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	N-Nitrosodiphenylamine	0/2	0/2	0/2	0/2	0/2	-	-	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2	0/2	0/2	0/2	-	-	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce A NGS (continued)					Bruce B NGS		
	NAME OF EFFLUENT STREAM:	Services Building	Water Treatment Plant	Ancillary Services Building	Accumulator Building	ECI Water Storage Tank Building	Intake	Outfall	Radioactive Liquid Waste Management
ANALYTICAL TEST GROUP	PARAMETERS								
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,3,4,6-Tetrachlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,3,5,6-Tetrachlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,3,4-Trichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,3,5-Trichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,4,5-Trichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,4,6-Trichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,4-Dimethyl phenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,4-Dinitrophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,4-Dichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2,6-Dichlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	4,6-Dinitro-o-cresol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	2-Chlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	4-Chloro-3-methylphenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	4-Nitrophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	m-Cresol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	o-Cresol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	p-Cresol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	Pentachlorophenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
	Phenol	0 / 2	0 / 2	0 / 2	-	0 / 2	-	-	0 / 2
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	1,2,3,5-Tetrachlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	1,2,4,5-Tetrachlorobenzene	-	-	-	-	-	0 / 1	0 / 1	0 / 2
	1,2,3-Trichlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	1,2,4-Trichlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	2,4,5-Trichlorotoluene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	Hexachlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	Hexachlorobutadiene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	Hexachlorocyclopentadiene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	Hexachloroethane	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2
	Octachlorostyrene	-	-	-	-	-	-	-	-
	Pentachlorobenzene	0 / 2	0 / 2	0 / 2	-	0 / 2	0 / 1	0 / 1	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce A NGS (continued)					Bruce B NGS		
		NAME OF EFFLUENT STREAM:	Services Building	Water Treatment Plant	Ancillary Services Building	Accumulator Building	ECI Water Storage Tank Building	Intake	Outfall	Radioactive Liquid Waste Management
ANALYTICAL TEST GROUP		PARAMETERS								
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total heptachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	-	-	0/2
		Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	-	-	0/2
25	Solvent Extractables	Oil and grease	1/2	1/2	1/2	0/2	1/2	0/1	0/1	0/2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/2	0/2	0/2	0/2	0/2	0/1	0/1	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Heavy Water Plants								
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Process Effluent	Degasser Hotwell	Intermittent Stripper Effluent	Effluent Lagoon	Surface Drainage Lagoon	Cooling Water from E4	Cooling Water from North Flare
ANALYTICAL TEST GROUP		PARAMETERS									
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/3	1/3	3/3	2/3	3/3	3/3	1/2	1/2	1/2
2	Total cyanide	Total cyanide	1/3	0/3	0/2	0/3	0/3	0/2	0/2	0/2	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	8	7-9	6	7-9	7	8	8	8
4a	Nitrogen	Ammonia plus Ammonium	0/3	0/3	0/3	0/3	0/3	0/3	1/2	0/2	0/2
		Total Kjeldahl nitrogen	0/3	0/3	0/3	0/3	0/3	0/3	2/2	0/2	0/2
4b		Nitrate + Nitrite	3/3	3/3	3/3	3/3	3/3	0/3	1/1	2/2	2/2
5a	Organic carbon	Dissolved organic carbon (DOC)	3/3	3/3	3/3	3/3	3/3	3/3	2/2	2/2	2/2
5b		Total organic carbon (TOC)	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/2	1/2
6	Total phosphorus	Total phosphorus	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0/3	0/3	0/3	0/3	0/3	0/3	1/1	0/2	0/2
		Volatile suspended solids (VSS)	0/2	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2
9	Total metals	Aluminum	2/3	2/3	2/3	3/3	3/3	3/3	2/2	2/2	2/2
		Beryllium	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Cadmium	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Chromium	0/3	0/3	0/3	0/3	0/3	0/3	0/2	1/2	0/2
		Cobalt	1/3	2/3	0/3	1/3	1/3	1/3	0/2	1/2	1/2
		Copper	0/3	1/3	0/3	1/3	0/3	0/3	0/2	1/2	1/2
		Lead	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Molybdenum	1/3	2/3	0/3	0/3	2/3	1/3	0/2	1/2	1/2
		Nickel	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Silver	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Thallium	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Vanadium	0/3	1/3	0/3	1/3	1/3	0/3	0/2	1/2	1/2
		Zinc	0/3	1/3	0/3	1/3	0/3	0/3	1/2	1/2	0/2
10	Hydrides	Antimony	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Arsenic	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
		Selenium	0/3	0/3	0/3	0/3	0/3	0/3	0/2	0/2	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0/1	0/1	0/1	0/1	0/1	0/1	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Heavy Water Plants								
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Process Effluent	Degasser Hotwell	Intermittent Stripper Effluent	Effluent Lagoon	Surface Drainage Lagoon	Cooling Water from E4	Cooling Water from North Flare
ANALYTICAL TEST GROUP		**PARAMETERS**									
12	Mercury	Mercury	0/3	0/3	0/2	0/2	1/2	1/2	0/2	0/2	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	2/3	1/3	1/3	1/3	0/3	0/3	2/2	2/2	1/2
15	Sulphide	Sulphide	0/3	0/3	1/3	0/3	0/3	0/4	0/2	0/2	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,1,2-Trichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,1-Dichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,1-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2-Dichloropropane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,3-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,4-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Bromoform	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Bromomethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Carbon tetrachloride	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Chlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Chloroform	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Chloromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Cis-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Dibromochloromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Ethylene dibromide	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Methylene chloride	1/3	0/3	1/2	0/2	1/2	1/2	1/2	0/2	2/2
		Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Trans-1,2-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Trans-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Trichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Trichlorofluoromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Vinyl chloride (Chloroethylene)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
17	Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Styrene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Toluene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		o-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		m-Xylene and p-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce Heavy Water Plants								
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Process Effluent	Degasser Hotwell	Intermittent Stripper Effluent	Effluent Lagoon	Surface Drainage Lagoon	Cooling Water from E4	Cooling Water from North Flare
ANALYTICAL TEST GROUP	PARAMETERS									
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-	-
	Acenaphthylene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Anthracene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benz(a)anthracene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(a)pyrene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(b)fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(g,h,i)perylene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(k)fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Biphenyl	-	-	-	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	1-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	2-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Chrysene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Dibenz(a,h)anthracene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Fluorene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Indole	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	1-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Naphthalene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Perylene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Phenanthrene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Pyrene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Benzyl butyl phthalate	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Di-n-butyl phthalate	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	4-Bromophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethyl)ether	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Diphenyl ether	-	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	2,6-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Diphenylamine	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodiphenylamine	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Heavy Water Plants								
		NAME OF EFFLUENT STREAM:	Intake	Outfall	Process Effluent	Degasser Hotwell	Intermittent Stripper Effluent	Effluent Lagoon	Surface Drainage Lagoon	Cooling Water from E4	Cooling Water from North Flare
ANALYTICAL TEST GROUP		PARAMETERS									
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,4,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,4-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4,6-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dimethyl phenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dinitrophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,6-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		4,6-Dinitro-o-cresol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2-Chlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		4-Chloro-3-methylphenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		4-Nitrophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		m-Cresol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		o-Cresol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		p-Cresol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Pentachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Phenol	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2,4,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2,3-Trichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		1,2,4-Trichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		2,4,5-Trichlorotoluene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Hexachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Hexachlorobutadiene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Hexachlorocyclopentadiene	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Hexachloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
		Octachlorostyrene	-	-	-	-	-	-	-	-	-
		Pentachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce Heavy Water Plants								
	NAME OF EFFLUENT STREAM:	Intake	Outfall	Process Effluent	Degasser Hotwell	Intermittent Stripper Effluent	Effluent Lagoon	Surface Drainage Lagoon	Cooling Water from E4	Cooling Water from North Flare
ANALYTICAL TEST GROUP	PARAMETERS									
24 Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total heptachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
25 Solvent Extractables	Oil and grease	1/3	0/3	2/3	1/3	2/3	2/2	2/2	0/2	1/2
27 Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/3	0/3	0/2	0/2	1/2	0/2	0/2	1/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Nuclear Power Development Services					
		NAME OF EFFLUENT STREAM:	Sewage Processing Plant Effluent*	Stream 'C' Tie Road	Stream 'C' at Baie du Dore	Radioactive Waste Disposal Site Drainage**	Condensate Plant Neutralization Sump	Ditch from Bruce NGS A
ANALYTICAL TEST GROUP		PARAMETERS						
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3/3	3/3	3/3	2/2	2/2	2/2
2	Total cyanide	Total cyanide	0/3	0/3	0/3	0/2	0/2	0/2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	7	7-8	8	8	7-8	8
4a	Nitrogen	Ammonia plus Ammonium	2/3	0/3	0/3	0/2	0/2	0/2
		Total Kjeldahl nitrogen	3/3	1/3	0/3	0/2	2/2	0/2
4b		Nitrate + Nitrite	3/3	0/3	3/3	1/2	2/2	2/2
5a	Organic carbon	Dissolved organic carbon (DOC)	3/3	3/3	3/3	2/2	2/2	2/2
5b		Total organic carbon (TOC)	1/3	3/3	3/3	1/2	2/2	0/2
6	Total phosphorus	Total phosphorus	3/3	1/3	0/3	0/2	0/2	0/2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	1/3	0/3	0/3	0/2	1/2	0/2
		Volatile suspended solids (VSS)	0/2	0/2	0/2	0/2	0/2	0/2
9	Total metals	Aluminum	3/3	3/3	3/3	2/2	2/2	2/2
		Beryllium	0/3	1/3	1/3	0/2	0/2	0/2
		Cadmium	0/3	0/3	0/3	1/2	0/2	0/2
		Chromium	1/3	0/3	1/3	0/2	0/2	0/2
		Cobalt	2/3	2/3	2/3	0/2	1/2	1/2
		Copper	3/3	1/3	1/3	0/2	1/2	0/2
		Lead	0/3	0/3	0/3	0/2	0/2	0/2
		Molybdenum	1/3	0/3	1/3	0/2	0/2	1/2
		Nickel	1/3	1/3	1/3	0/2	0/2	0/2
		Silver	0/3	0/3	0/3	0/2	0/2	0/2
		Thallium	0/3	0/3	0/3	0/2	0/2	0/2
		Vanadium	1/3	1/3	1/3	0/1	0/2	0/2
		Zinc	3/3	0/3	1/3	1/1	1/2	2/2
10	Hydrides	Antimony	0/3	0/3	0/3	0/2	0/2	0/2
		Arsenic	0/3	0/3	0/3	0/2	0/2	0/2
		Selenium	0/3	0/3	0/3	0/2	0/2	0/2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Nuclear Power Development Services					
		NAME OF EFFLUENT STREAM:	Sewage Processing Plant Effluent*	Stream 'C' Tie Road	Stream 'C' at Baie du Dore	Radioactive Waste Disposal Site Drainage**	Condensate Plant Neutralization Sump	Ditch from Bruce NGS A
ANALYTICAL TEST GROUP		PARAMETERS						
12	Mercury	Mercury	1/3	0/3	0/3	0/2	0/2	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	0/3	0/3	0/3	0/2	0/2	1/2
15	Sulphide	Sulphide	0/3	0/3	0/3	0/2	0/2	0/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/3	0/2	0/2	0/2
		1,1,2-Trichloroethane	0/3	0/3	0/3	0/2	0/2	0/2
		1,1-Dichloroethane	0/3	0/3	0/3	0/2	0/2	0/2
		1,1-Dichloroethylene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2-Dichlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/3	0/2	0/2	0/2
		1,2-Dichloropropane	0/3	0/3	0/3	0/2	0/2	0/2
		1,3-Dichlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,4-Dichlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		Bromoform	0/3	0/3	0/3	0/2	0/2	0/2
		Bromomethane	0/3	0/3	0/3	0/2	0/2	0/2
		Carbon tetrachloride	0/3	0/3	0/3	0/2	0/2	0/2
		Chlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		Chloroform	1/3	0/3	0/3	0/2	0/2	0/2
		Chloromethane	0/3	0/3	0/3	0/2	0/2	0/2
		Cis-1,3-Dichloropropylene	0/3	0/3	0/3	0/2	0/2	0/2
		Dibromochloromethane	0/3	0/3	0/3	0/2	0/2	0/2
		Ethylene dibromide	0/3	0/3	0/3	0/2	0/2	0/2
		Methylene chloride	0/3	0/3	1/3	2/2	1/2	0/2
		Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/3	0/2	0/2	0/2
		Trans-1,2-Dichloroethylene	0/3	0/3	0/3	0/2	0/2	0/2
		Trans-1,3-Dichloropropylene	0/3	0/3	0/3	0/2	0/2	0/2
		Trichloroethylene	0/3	0/3	0/3	0/2	0/2	0/2
		Trichlorofluoromethane	0/3	0/3	0/3	0/2	1/2	0/2
		Vinyl chloride (Chloroethylene)	0/3	0/3	0/3	0/2	0/2	0/2
17	Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/3	0/2	0/2	0/2
		Styrene	0/2	0/2	0/2	0/2	0/2	0/2
		Toluene	0/3	0/3	0/3	0/2	1/2	0/2
		o-Xylene	0/3	0/3	0/3	0/2	0/2	0/2
		m-Xylene and p-Xylene	0/3	0/3	0/3	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce Nuclear Power Development Services					
	NAME OF EFFLUENT STREAM:	Sewage Processing Plant Effluent*	Stream 'C' Tie Road	Stream 'C' at Baie du Dore	Radioactive Waste Disposal Site Drainage**	Condensate Plant Neutralization Sump	Ditch from Bruce NGS A
ANALYTICAL TEST GROUP	PARAMETERS						
19 Extractables, Base Neutral	Acenaphthene	0/2	0/2	0/2	0/2	0/2	0/2
	5-nitro Acenaphthene	0/2	0/2	0/2	0/2	0/2	0/2
	Acenaphthylene	0/2	0/2	0/2	0/2	0/2	0/2
	Anthracene	0/2	0/2	0/2	0/2	0/2	0/2
	Benz(a)anthracene	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(a)pyrene	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(b)fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(g,h,i)perylene	0/2	0/2	0/2	0/2	0/2	0/2
	Benzo(k)fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2
	Biphenyl	-	-	-	-	-	-
	Camphene	0/2	0/2	0/2	0/2	0/2	0/2
	1-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	0/2
	2-Chloronaphthalene	0/2	0/2	0/2	0/2	0/2	0/2
	Chrysene	0/2	0/2	0/2	0/2	0/2	0/2
	Dibenz(a,h)anthracene	0/2	0/2	0/2	0/2	0/2	0/2
	Fluoranthene	0/2	0/2	0/2	0/2	0/2	0/2
	Fluorene	0/2	0/2	0/2	0/2	0/2	0/2
	Indeno(1,2,3-cd)pyrene	0/2	0/2	0/2	0/2	0/2	0/2
	Indole	0/2	0/2	0/2	0/2	0/2	0/2
	1-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2
	2-Methylnaphthalene	0/2	0/2	0/2	0/2	0/2	0/2
	Naphthalene	0/2	0/2	0/2	0/2	0/2	0/2
	Perylene	0/2	0/2	0/2	0/2	0/2	0/2
	Phenanthrene	0/2	0/2	0/2	0/2	0/2	0/2
	Pyrene	0/2	0/2	0/2	0/2	0/2	0/2
	Benzyl butyl phthalate	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-ethylhexyl) phthalate	0/2	0/2	0/2	1/2	0/2	0/2
	Di-n-butyl phthalate	0/2	0/2	0/2	0/2	0/2	0/2
	4-Bromophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	0/2
	4-Chlorophenyl phenyl ether	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroisopropyl)ether	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethyl)ether	0/2	0/2	0/2	0/2	0/2	0/2
	Diphenyl ether	-	-	-	-	-	-
	2,4-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	0/2
	2,6-Dinitrotoluene	0/2	0/2	0/2	0/2	0/2	0/2
	Bis(2-chloroethoxy)methane	0/2	0/2	0/2	0/2	0/2	0/2
	Diphenylamine	0/2	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodiphenylamine	0/2	0/2	0/2	0/2	0/2	0/2
	N-Nitrosodi-n-propylamine	0/2	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Bruce Nuclear Power Development Services					
		NAME OF EFFLUENT STREAM:	Sewage Processing Plant Effluent*	Stream 'C' Tie Road	Stream 'C' at Baie du Dore	Radioactive Waste Disposal Site Drainage**	Condensate Plant Neutralization Sump	Ditch from Bruce NGS A
ANALYTICAL TEST GROUP		PARAMETERS						
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,4,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,4-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,3,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,4,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,4,6-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dimethyl phenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dinitrophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,4-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		2,6-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		4,6-Dinitro-o-cresol	0/2	0/2	0/2	0/2	0/2	0/2
		2-Chlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		4-Chloro-3-methylphenol	0/2	0/2	0/2	0/2	0/2	0/2
		4-Nitrophenol	0/2	0/2	0/2	0/2	0/2	0/2
		m-Cresol	0/2	0/2	0/2	0/2	0/2	0/2
		o-Cresol	0/2	0/2	0/2	0/2	0/2	0/2
		p-Cresol	0/2	0/2	0/2	0/2	0/2	0/2
		Pentachlorophenol	0/2	0/2	0/2	0/2	0/2	0/2
		Phenol	0/2	0/2	0/2	0/2	0/2	0/2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2,4,5-Tetrachlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2,3-Trichlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		1,2,4-Trichlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		2,4,5-Trichlorotoluene	0/3	0/3	0/3	0/2	0/2	0/2
		Hexachlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2
		Hexachlorobutadiene	0/3	0/3	0/3	0/2	0/2	0/2
		Hexachlorocyclopentadiene	0/3	0/3	0/3	0/2	0/2	0/2
		Hexachloroethane	0/3	0/3	0/3	0/2	0/2	0/2
		Octachlorostyrene	-	-	-	-	-	-
		Pentachlorobenzene	0/3	0/3	0/3	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Bruce Nuclear Power Development Services					
	NAME OF EFFLUENT STREAM:	Sewage Processing Plant Effluent*	Stream 'C' Tie Road	Stream 'C' at Baie du Dore	Radioactive Waste Disposal Site Drainage**	Condensate Plant Neutralization Sump	Ditch from Bruce NGS A
ANALYTICAL TEST GROUP	PARAMETERS						
24 Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2
	Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/2
	Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2	0/2
	Total heptachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2
	Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2
	Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2
	Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2
	Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2
	Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/2
	Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/2
	Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	1/2	0/2
25 Solvent Extractables	Oil and grease	0/3	0/3	0/3	0/2	0/2	0/2
27 Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/3	0/3	0/3	0/2	0/2	0/2

* Requirements in Schedule E

** Requirements in Schedule F

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Chalk River Nuclear Laboratories										
		NAME OF EFFLUENT STREAM:	Duke Stream	Perch Creek	Intake	Pump-house Drain	Process Sewer	Sanitary Sewer	01 Stream	02 Stream	03 Stream	04 Stream	05 Stream
ANALYTICAL TEST GROUP		PARAMETERS											
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
2	Total cyanide	Total cyanide	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
3	Hydrogen ion (pH)	Hydrogen ion (pH)	7	7	7	8	7	3	7	7	7	7	7
4a	Nitrogen	Ammonia plus Ammonium	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1	0/1
		Total Kjeldahl nitrogen	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1	0/1
4b		Nitrate + Nitrite	0/1	0/1	1/1	1/1	1/1	0/1	1/1	1/1	1/1	1/1	1/1
5a	Organic carbon	Dissolved organic carbon (DOC)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
5b		Total organic carbon (TOC)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6	Total phosphorus	Total phosphorus	0/1	0/1	0/1	1/1	0/1	1/1	1/1	0/1	0/1	0/1	0/1
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	1/1	0/1	0/1	0/1	0/1	1/1	1/1	1/1	1/1	0/1	0/1
		Volatile suspended solids (VSS)	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1
9	Total metals	Aluminum	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		Beryllium	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Cadmium	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Chromium	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Cobalt	0/1	0/1	0/1	1/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1
		Copper	1/1	0/1	0/1	0/1	0/1	1/1	1/1	0/1	0/1	0/1	1/1
		Lead	0/1	0/1	0/1	0/1	0/1	1/1	1/1	0/1	1/1	1/1	0/1
		Molybdenum	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Nickel	0/1	0/1	0/1	0/1	0/1	1/1	1/1	0/1	0/1	0/1	0/1
		Silver	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Thallium	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Vanadium	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1
		Zinc	1/1	0/1	0/1	0/1	0/1	1/1	1/1	0/1	0/1	0/1	1/1
10	Hydrides	Antimony	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Arsenic	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Selenium	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Chalk River Nuclear Laboratories										
	NAME OF EFFLUENT STREAM:	Duke Stream	Perch Creek	Intake	Pump-house Drain	Process Sewer	Sanitary Sewer	01 Stream	02 Stream	03 Stream	04 Stream	05 Stream
ANALYTICAL TEST GROUP	PARAMETERS											
12 Mercury	Mercury	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
14 Phenolics (4AAP)	Phenolics (4AAP)	0/1	0/1	0/1	0/1	1/1	1/1	1/1	0/1	0/1	0/1	0/1
15 Sulphide	Sulphide	0/1	1/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	1/1
16 Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,1,2-Trichloroethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,1-Dichloroethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,1-Dichloroethylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2-Dichlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2-Dichloroethane (Ethylene dichloride)	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2-Dichloropropane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,3-Dichlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,4-Dichlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Bromoform	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Bromomethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Carbon tetrachloride	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Chlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Chloroform	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	1/1	1/1	0/1
	Chloromethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Cis-1,3-Dichloropropylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Dibromochloromethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Ethylene dibromide	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Methylene chloride	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Tetrachloroethylene (Perchloroethylene)	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Trans-1,2-Dichloroethylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Trans-1,3-Dichloropropylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Trichloroethylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Trichlorofluoromethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Vinyl chloride (Chloroethylene)	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
17 Volatiles, Non-Halogenated	Benzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Styrene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Toluene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	o-Xylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	m-Xylene and p-Xylene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Chalk River Nuclear Laboratories										
	NAME OF EFFLUENT STREAM:	Duke Stream	Perch Creek	Intake	Pump-house Drain	Process Sewer	Sanitary Sewer	01 Stream	02 Stream	03 Stream	04 Stream	05 Stream
ANALYTICAL TEST GROUP	PARAMETERS											
19 Extractables, Base Neutral	Acenaphthene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	5-nitro Acenaphthene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Acenaphthylene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Anthracene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benz(a)anthracene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benzo(a)pyrene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benzo(b)fluoranthene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benzo(g,h,i)perylene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benzo(k)fluoranthene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Biphenyl	-	-	-	-	-	-	-	-	-	-	-
	Camphene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	1-Chloronaphthalene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	2-Chloronaphthalene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Chrysene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Dibenz(a,h)anthracene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Fluoranthene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Fluorene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Indeno(1,2,3-cd)pyrene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Indole	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	1-Methylnaphthalene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	2-Methylnaphthalene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Naphthalene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Perylene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Phenanthrene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Pyrene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Benzyl butyl phthalate	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Bis(2-ethylhexyl) phthalate	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Di-n-butyl phthalate	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	1 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	4-Bromophenyl phenyl ether	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	4-Chlorophenyl phenyl ether	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Bis(2-chloroisopropyl)ether	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Bis(2-chloroethyl)ether	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Diphenyl ether	-	-	-	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	2,6-Dinitrotoluene	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Bis(2-chloroethoxy)methane	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	Diphenylamine	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	N-Nitrosodiphenylamine	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
	N-Nitrosodi-n-propylamine	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Chalk River Nuclear Laboratories										
	NAME OF EFFLUENT STREAM:	Duke Stream	Perch Creek	Intake	Pump-house Drain	Process Sewer	Sanitary Sewer	01 Stream	02 Stream	03 Stream	04 Stream	05 Stream
ANALYTICAL TEST GROUP	PARAMETERS											
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,3,4,6-Tetrachlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,3,5,6-Tetrachlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,3,4-Trichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,3,5-Trichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4,5-Trichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4,6-Trichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4-Dimethyl phenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4-Dinitrophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4-Dichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,6-Dichlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	4,6-Dinitro-o-cresol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2-Chlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	4-Chloro-3-methylphenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	4-Nitrophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	m-Cresol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	o-Cresol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	p-Cresol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Pentachlorophenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Phenol	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2,3,5-Tetrachlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2,4,5-Tetrachlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2,3-Trichlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	1,2,4-Trichlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	2,4,5-Trichlorotoluene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Hexachlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Hexachlorobutadiene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Hexachlorocyclopentadiene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Hexachloroethane	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Octachlorostyrene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
	Pentachlorobenzene	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Chalk River Nuclear Laboratories										
		NAME OF EFFLUENT STREAM:	Duke Stream	Perch Creek	Intake	Pump-house Drain	Process Sewer	Sanitary Sewer	01 Stream	02 Stream	03 Stream	04 Stream	05 Stream
ANALYTICAL TEST GROUP		PARAMETERS											
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Octachlorodibenzo-p-dioxin	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Octachlorodibenzofuran	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total heptachlorinated dibenzo-p-dioxins	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total heptachlorinated dibenzofurans	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total hexachlorinated dibenzo-p-dioxins	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total hexachlorinated dibenzofurans	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total pentachlorinated dibenzo-p-dioxins	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total pentachlorinated dibenzofurans	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total tetrachlorinated dibenzo-p-dioxins	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
		Total tetrachlorinated dibenzofurans	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
25	Solvent Extractables	Oil and grease	0/1	1/1	0/1	0/1	1/1	1/1	1/1	0/1	0/1	0/1	0/1
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Darlington Nuclear Generating Station (under construction)								
		NAME OF EFFLUENT STREAM:	Intake	Sewage Treatment Plant	Boiler Blowdown	Water Treatment Plant	Storm Drain	Pipe Cleaning Rinse Tank 2	Pipe Cleaning Rinse Tank 4	Waste Lagoon	Waste Disposal Site Settling Pond
ANALYTICAL TEST GROUP		PARAMETERS									
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	3/3	3/3	2/2	1/2	2/2	2/2	2/2	3/3	3/3
2	Total cyanide	Total cyanide	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	7	11	8	8	7-8	5-7	8	8
4a	Nitrogen	Ammonia plus Ammonium	0/3	3/3	0/2	0/2	2/2	0/2	0/2	0/3	0/3
		Total Kjeldahl nitrogen	0/3	3/3	2/2	1/2	2/2	1/2	0/2	0/3	3/3
4b		Nitrate + Nitrite	1/3	3/3	2/2	2/2	2/2	2/2	2/2	2/3	2/3
5a	Organic carbon	Dissolved organic carbon (DOC)	3/3	3/3	2/2	2/2	2/2	2/2	2/2	3/3	3/3
5b		Total organic carbon (TOC)	0/3	3/3	2/2	0/2	1/2	2/2	2/2	0/3	2/3
6	Total phosphorus	Total phosphorus	0/3	2/3	2/2	0/2	0/2	1/2	1/2	0/3	0/3
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	2/3	3/3	2/2	0/2	0/2	2/2	2/2	0/3	2/3
		Volatile suspended solids (VSS)	0/2	2/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
9	Total metals	Aluminum	3/3	3/3	2/2	2/2	2/2	2/2	2/2	3/3	3/3
		Beryllium	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
		Cadmium	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
		Chromium	2/3	3/3	1/2	0/2	1/2	2/2	1/2	1/3	2/3
		Cobalt	1/3	2/3	1/2	0/2	1/2	2/2	0/2	1/3	1/3
		Copper	2/3	3/3	2/2	1/2	1/2	2/2	1/2	2/3	2/3
		Lead	0/3	0/3	2/2	0/2	0/2	0/2	0/2	0/3	0/3
		Molybdenum	2/3	3/3	1/2	0/2	1/2	2/2	0/2	1/3	1/3
		Nickel	1/3	1/3	0/2	0/2	0/2	1/2	0/2	1/3	1/3
		Silver	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
		Thallium	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
		Vanadium	0/3	0/3	0/2	0/2	0/2	1/2	0/2	0/3	0/3
		Zinc	1/3	3/3	2/2	0/2	2/2	2/2	1/2	2/3	2/3
10	Hydrides	Antimony	0/3	0/3	0/2	0/2	0/2	0/2	1/2	0/3	0/3
		Arsenic	0/3	0/3	1/2	0/2	0/2	0/2	1/2	0/3	0/3
		Selenium	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
11	Chromium (Hexavalent)	Chromium (Hexavalent)	0/1	0/1	-	-	-	0/1	-	0/1	1/1

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Darlington Nuclear Generating Station (under construction)								
	NAME OF EFFLUENT STREAM:	Intake	Sewage Treatment Plant	Boiler Blowdown	Water Treatment Plant	Storm Drain	Pipe Cleaning Rinse Tank 2	Pipe Cleaning Rinse Tank 4	Waste Lagoon	Waste Disposal Site Settling Pond
ANALYTICAL TEST GROUP	PARAMETERS									
12 Mercury	Mercury	0/3	2/3	2/3	1/2	0/2	0/2	1/2	0/3	0/3
14 Phenolics (4AAP)	Phenolics (4AAP)	0/2	2/2	2/2	0/2	1/2	1/1	2/2	0/2	2/2
15 Sulphide	Sulphide	0/3	0/3	0/2	0/2	5/8	0/2	0/2	0/3	0/3
16 Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,1,2-Trichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,1-Dichloroethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,1-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,2-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,2-Dichloroethane (Ethylene dichloride)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,2-Dichloropropane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,3-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	1,4-Dichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Bromoform	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Bromomethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Carbon tetrachloride	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Chlorobenzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Chloroform	0/3	2/3	0/2	1/2	2/2	2/2	2/2	0/3	0/3
	Chloromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Cis-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Dibromochloromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Ethylene dibromide	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Methylene chloride	2/3	1/3	1/2	1/2	1/2	0/2	0/2	0/3	0/3
	Tetrachloroethylene (Perchloroethylene)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Trans-1,2-Dichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Trans-1,3-Dichloropropylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Trichloroethylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Trichlorofluoromethane	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Vinyl chloride (Chloroethylene)	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
17 Volatiles, Non-Halogenated	Benzene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/3	0/3
	Styrene	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
	Toluene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	o-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2
	m-Xylene and p-Xylene	0/3	0/3	0/2	0/2	0/2	0/2	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Darlington Nuclear Generating Station (under construction)								
	NAME OF EFFLUENT STREAM:	Intake	Sewage Treatment Plant	Boiler Blowdown	Water Treatment Plant	Storm Drain	Pipe Cleaning Rinse Tank 2	Pipe Cleaning Rinse Tank 4	Waste Lagoon	Waste Disposal Site Settling Pond
ANALYTICAL TEST GROUP	**PARAMETERS**									
19 Extractables, Base Neutral	Acenaphthene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	5-nitro Acenaphthene	-	-	-	-	-	-	-	-	-
	Acenaphthylene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Anthracene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benz(a)anthracene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benzo(a)pyrene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benzo(b)fluoranthene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benzo(g,h,i)perylene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benzo(k)fluoranthene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Biphenyl	-	-	-	-	-	-	-	-	-
	Camphene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	1-Chloronaphthalene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	2-Chloronaphthalene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Chrysene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Dibenz(a,h)anthracene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Fluoranthene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Fluorene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Indeno(1,2,3-cd)pyrene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Indole	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	1-Methylnaphthalene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	2-Methylnaphthalene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Naphthalene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Perylene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Phenanthrene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Pyrene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Benzyl butyl phthalate	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Bis(2-ethylhexyl) phthalate	1 / 2	2 / 2	1 / 2	0 / 2	0 / 2	1 / 1	1 / 2	0 / 2	0 / 2
	Di-n-butyl phthalate	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	4-Bromophenyl phenyl ether	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	4-Chlorophenyl phenyl ether	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Bis(2-chloroisopropyl)ether	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Bis(2-chloroethyl)ether	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Diphenyl ether	-	-	-	-	-	-	-	-	-
	2,4-Dinitrotoluene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	2,6-Dinitrotoluene	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Bis(2-chloroethoxy)methane	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	Diphenylamine	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	N-Nitrosodiphenylamine	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2
	N-Nitrosodi-n-propylamine	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 2	0 / 2	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Darlington Nuclear Generating Station (under construction)								
		NAME OF EFFLUENT STREAM:	Intake	Sewage Treatment Plant	Boiler Blowdown	Water Treatment Plant	Storm Drain	Pipe Cleaning Rinse Tank 2	Pipe Cleaning Rinse Tank 4	Waste Lagoon	Waste Disposal Site Settling Pond
ANALYTICAL TEST GROUP		PARAMETERS									
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,3,4,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,3,5,6-Tetrachlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,3,4-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,3,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4,5-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4,6-Trichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4-Dimethyl phenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4-Dinitrophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,6-Dichlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		4,6-Dinitro-o-cresol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2-Chlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		4-Chloro-3-methylphenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		4-Nitrophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		m-Cresol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		o-Cresol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		p-Cresol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Pentachlorophenol	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Phenol	0/2	1/3	0/2	0/2	0/2	1/2	1/2	1/3	0/2
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		1,2,3,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		1,2,4,5-Tetrachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		1,2,3-Trichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		1,2,4-Trichlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		2,4,5-Trichlorotoluene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Hexachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Hexachlorobutadiene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Hexachlorocyclopentadiene	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Hexachloroethane	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Octachlorostyrene	-	-	-	-	-	-	-	-	-
		Pentachlorobenzene	0/3	0/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Darlington Nuclear Generating Station (under construction)								
		NAME OF EFFLUENT STREAM:	Intake	Sewage Treatment Plant	Boiler Blowdown	Water Treatment Plant	Storm Drain	Pipe Cleaning Rinse Tank 2	Pipe Cleaning Rinse Tank 4	Waste Lagoon	Waste Disposal Site Settling Pond
ANALYTICAL TEST GROUP		PARAMETERS									
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Octachlorodibenzo-p-dioxin	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Octachlorodibenzofuran	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total heptachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total heptachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total hexachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total hexachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total pentachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total pentachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total tetrachlorinated dibenzo-p-dioxins	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
		Total tetrachlorinated dibenzofurans	0/2	0/2	0/2	0/2	0/2	0/1	0/2	0/2	0/2
25	Solvent Extractables	Oil and grease	1/3	2/3	2/2	1/2	0/2	1/2	2/2	1/3	1/3
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/3	2/3	0/2	0/2	0/2	0/1	0/2	0/2	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Douglas Point WMF		Nuclear Power Demonstration WMF			Pickering NGS			
		NAME OF EFFLUENT STREAM:	Intake	Outfall*	Intake	Inactive Drainage	Manhole # 2	Intake	Outfall Unit 3	Outfall Unit 5	Radioactive Liquid Waste Management Tank
ANALYTICAL TEST GROUP		PARAMETERS									
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	1 / 1	2 / 2	0 / 2	2 / 2	2 / 2	1 / 1	1 / 1	1 / 1	2 / 2
2	Total cyanide	Total cyanide	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
3	Hydrogen ion (pH)	Hydrogen ion (pH)	8	7	6	6	6	8	8	8	6
4a	Nitrogen	Ammonia plus Ammonium	0 / 1	1 / 2	0 / 2	2 / 2	1 / 2	0 / 1	0 / 1	0 / 1	1 / 2
		Total Kjeldahl nitrogen	0 / 1	2 / 2	0 / 2	2 / 2	1 / 2	0 / 1	0 / 1	0 / 1	2 / 2
4b		Nitrate + Nitrite	1 / 1	2 / 2	2 / 2	0 / 2	2 / 2	1 / 1	1 / 1	1 / 1	0 / 2
5a	Organic carbon	Dissolved organic carbon (DOC)	1 / 1	2 / 2	0 / 2	2 / 2	1 / 2	1 / 1	1 / 1	1 / 1	2 / 2
5b		Total organic carbon (TOC)	0 / 1	1 / 2	0 / 2	2 / 2	1 / 2	0 / 1	0 / 1	0 / 1	2 / 2
6	Total phosphorus	Total phosphorus	0 / 1	0 / 2	0 / 2	2 / 2	0 / 2	0 / 1	0 / 1	0 / 1	2 / 2
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	0 / 1	0 / 2	0 / 2	2 / 2	1 / 2	0 / 1	0 / 1	1 / 1	2 / 2
		Volatile suspended solids (VSS)	0 / 1	1 / 2	0 / 2	1 / 2	1 / 2	-	-	-	2 / 2
9	Total metals	Aluminum	1 / 1	1 / 2	2 / 2	2 / 2	2 / 2	1 / 1	1 / 1	1 / 1	2 / 2
		Beryllium	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Cadmium	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	1 / 2
		Chromium	0 / 1	1 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Cobalt	0 / 1	1 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Copper	0 / 1	1 / 2	1 / 2	2 / 2	1 / 2	0 / 1	0 / 1	1 / 1	2 / 2
		Lead	0 / 1	1 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	1 / 2
		Molybdenum	1 / 1	1 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Nickel	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Silver	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Thallium	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Vanadium	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	-	0 / 1	0 / 2
		Zinc	1 / 1	2 / 2	2 / 2	2 / 2	2 / 2	0 / 1	0 / 1	0 / 1	2 / 2
10	Hydrides	Antimony	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Arsenic	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
		Selenium	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
11	Chromium (Hexavalent)	Chromium (Hexavalent)	-	-	-	-	-	-	-	-	-

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Douglas Point WMF		Nuclear Power Demonstration WMF			Pickering NGS			
		NAME OF EFFLUENT STREAM:	Intake	Outfall*	Intake	Inactive Drainage	Manhole # 2	Intake	Outfall Unit 3	Outfall Unit 5	Radioactive Liquid Waste Management Tank
ANALYTICAL TEST GROUP		PARAMETERS									
12	Mercury	Mercury	0/1	0/2	0/2	1/2	0/2	0/1	0/1	0/1	0/2
14	Phenolics (4AAP)	Phenolics (4AAP)	0/1	0/2	0/2	2/2	1/2	1/1	0/1	0/1	-
15	Sulphide	Sulphide	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	2/2
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,1,2-Trichloroethane	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,1-Dichloroethane	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,1-Dichloroethylene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,2-Dichlorobenzene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,2-Dichloroethane (Ethylene dichloride)	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,2-Dichloropropane	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,3-Dichlorobenzene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		1,4-Dichlorobenzene	0/1	0/2	0/2	2/2	0/2	0/1	0/1	0/1	0/2
		Bromoform	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Bromomethane	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Carbon tetrachloride	0/1	0/2	0/2	1/2	0/2	0/1	0/1	0/1	0/2
		Chlorobenzene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Chloroform	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Chloromethane	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Cis-1,3-Dichloropropylene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Dibromochloromethane	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Ethylene dibromide	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Methylene chloride	1/1	2/2	2/2	2/2	2/2	1/1	1/1	0/1	1/2
		Tetrachloroethylene (Perchloroethylene)	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Trans-1,2-Dichloroethylene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Trans-1,3-Dichloropropylene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Trichloroethylene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Trichlorofluoromethane	0/1	0/2	0/2	1/2	0/2	-	-	-	0/2
		Vinyl chloride (Chloroethylene)	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
17	Volatiles, Non-Halogenated	Benzene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Styrene	0/1	0/2	0/2	0/2	0/2	0/1	0/1	0/1	0/2
		Toluene	0/1	0/2	0/2	1/2	0/2	0/1	0/1	0/1	0/2
		o-Xylene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		m-Xylene and p-Xylene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Douglas Point WMF		Nuclear Power Demonstration WMF			Pickering NGS			
	NAME OF EFFLUENT STREAM:	Intake	Outfall*	Intake	Inactive Drainage	Manhole # 2	Intake	Outfall Unit 3	Outfall Unit 5	Radioactive Liquid Waste Management Tank
ANALYTICAL TEST GROUP	PARAMETERS									
19 Extractables, Base Neutral	Acenaphthene	0/1	0/2	-	-	-	-	-	-	0/2
	5-nitro Acenaphthene	-	-	0/2	0/2	0/2	-	-	-	0/2
	Acenaphthylene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Anthracene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benz(a)anthracene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benzo(a)pyrene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benzo(b)fluoranthene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benzo(g,h,i)perylene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benzo(k)fluoranthene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Biphenyl	-	-	0/2	0/2	0/2	-	-	-	0/2
	Camphene	0/1	0/2	0/2	0/2	0/2	-	-	-	-
	1-Chloronaphthalene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	2-Chloronaphthalene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Chrysene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Dibenz(a,h)anthracene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Fluoranthene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Fluorene	0/1	0/2	0/2	0/2	1/2	-	-	-	0/2
	Indeno(1,2,3-cd)pyrene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Indole	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	1-Methylnaphthalene	0/1	0/2	0/2	0/2	0/2	-	-	-	1/2
	2-Methylnaphthalene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Naphthalene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Perylene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Phenanthrene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Pyrene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Benzyl butyl phthalate	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Bis(2-ethylhexyl) phthalate	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Di-n-butyl phthalate	0/1	0/2	0/2	0/2	0/2	-	-	-	2/2
	4-Bromophenyl phenyl ether	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	4-Chlorophenyl phenyl ether	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Bis(2-chloroisopropyl)ether	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Bis(2-chloroethyl)ether	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Diphenyl ether	-	-	0/2	0/2	0/2	-	-	-	0/2
	2,4-Dinitrotoluene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	2,6-Dinitrotoluene	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Bis(2-chloroethoxy)methane	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	Diphenylamine	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	N-Nitrosodiphenylamine	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
	N-Nitrosodi-n-propylamine	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

	NAME OF COMPANY:	Douglas Point WMF		Nuclear Power Demonstration WMF			Pickering NGS			
	NAME OF EFFLUENT STREAM:	Intake	Outfall*	Intake	Inactive Drainage	Manhole # 2	Intake	Outfall Unit 3	Outfall Unit 5	Radioactive Liquid Waste Management Tank
ANALYTICAL TEST GROUP	PARAMETERS									
20 Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,3,4,6-Tetrachlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,3,5,6-Tetrachlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,3,4-Trichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,3,5-Trichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,4,5-Trichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,4,6-Trichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,4-Dimethyl phenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,4-Dinitrophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,4-Dichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2,6-Dichlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	4,6-Dinitro-o-cresol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	2-Chlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	4-Chloro-3-methylphenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	4-Nitrophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	m-Cresol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	o-Cresol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	p-Cresol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	Pentachlorophenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	Phenol	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
23 Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	1,2,3,5-Tetrachlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	1,2,4,5-Tetrachlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	2 / 2
	1,2,3-Trichlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	1,2,4-Trichlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	2,4,5-Trichlorotoluene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	Hexachlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	Hexachlorobutadiene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	Hexachlorocyclopentadiene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2
	Hexachloroethane	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	0 / 1	0 / 1	0 / 1	0 / 2
	Octachlorostyrene	-	-	-	-	-	-	-	-	-
	Pentachlorobenzene	0 / 1	0 / 2	0 / 2	0 / 2	0 / 2	-	-	-	0 / 2

TABLE 5 - ELECTRIC POWER GENERATION SECTOR PRE-REGULATION MONITORING FREQUENCIES OF DETECTION

		NAME OF COMPANY:	Douglas Point WMF		Nuclear Power Demonstration WMF			Pickering NGS			
		NAME OF EFFLUENT STREAM:	Intake	Outfall*	Intake	Inactive Drainage	Manhole # 2	Intake	Outfall Unit 3	Outfall Unit 5	Radioactive Liquid Waste Management Tank
ANALYTICAL TEST GROUP		PARAMETERS									
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Octachlorodibenzo-p-dioxin	0/1	0/2	0/2	0/2	0/2	-	-	-	2/2
		Octachlorodibenzofuran	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total heptachlorinated dibenzo-p-dioxins	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total heptachlorinated dibenzofurans	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total hexachlorinated dibenzo-p-dioxins	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total hexachlorinated dibenzofurans	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total pentachlorinated dibenzo-p-dioxins	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total pentachlorinated dibenzofurans	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total tetrachlorinated dibenzo-p-dioxins	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
		Total tetrachlorinated dibenzofurans	0/1	0/2	0/2	0/2	0/2	-	-	-	0/2
25	Solvent Extractables	Oil and grease	0/1	0/2	0/2	2/2	1/2	0/1	0/1	0/1	2/2
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	0/1	0/2	1/2	1/2	0/2	0/1	0/1	0/1	2/2

* Requirements in Schedule E

TABLE 6 - ROTATIONAL SAMPLING SCHEDULE FOR BOILER BLOWDOWN EFFLUENT

FOSSIL FUELLED STATIONS

STATION	UNIT	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12
LAKEVIEW TGS	1	B						B					
	2		B						B				
	3			B						B			
	4				B						B		
	5					B						B	
	6						B						B
	7	B						B					
	8		B						B				
LAMBTON TGS	1	B				B				B			
	2		B				B				B		
	3			B				B				B	
	4				B				B				B
NANTICOKE TGS	1	B						B					
	2		B						B				
	3			B						B			
	4				B						B		
	5					B						B	
	6						B						B
	7	B						B					
	8		B						B				
THUNDERBAY TGS	2	B		B		B		B		B		B	
	3		B		B		B		B		B		B
ATIKOKAN TGS	1	B	B	B	B	B	B	B	B	B	B	B	B
LENNOX TGS	1	B			B			B			B		
	2		B			B			B			B	
	4			B			B			B			B

TABLE 6 - ROTATIONAL SAMPLING SCHEDULE FOR BOILER BLOWDOWN EFFLUENT

		NUCLEAR POWERED STATIONS											
STATION	UNIT	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12
PICKERING NGS-A	1	B				B				B			
	2		B				B				B		
	3			B				B				B	
	4				B				B				B
PICKERING NGS-B	5	B				B				B			
	6		B				B				B		
	7			B				B				B	
	8				B				B				B
DARLINGTON NGS	2	B	B	B	B	B	B	B	B	B	B	B	B
BRUCE NGS-A	1	B				B				B			
	2		B				B				B		
	3			B				B				B	
	4				B				B				B
BRUCE NGS - B	1	B				B				B			
	2		B				B				B		
	3			B				B				B	
	4				B				B				B

TABLE 7

Summary of the Parameter/Frequency Assignment Rules

A) PROCESS EFFLUENTS / COMBINED EFFLUENT / BOILER BLOWDOWN EFFLUENT

DAILY

Conventional Pollutants:

All effluents : pH, Specific Conductance (continuous monitoring preferred).

Certain effluents : TSS, Sulphide.

THRICE WEEKLY

Conventional Pollutants:

Triggers : Total Ammonia > = 10 mg/L
(NO3 + NO2) > = 10 mg/L
Phenolics (4AAP) > = 10 ug/L
Total Phosphorus and Total nitrogen (sewage treatment plants only).

Certain effluents (some or all of the following) :

Fossil-fuelled TGS : DOC, TOC, Ammonia plus ammonium, nitrate plus nitrite, Total Phosphorus, TSS, VSS, Phenolics, Solvent Extractables.

Nuclear-powered TGS : DOC, TOC, Ammonia plus ammonium, nitrate plus nitrite, Total Kjeldahl Nitrogen, DOC, TOC, Total Phosphorus, TSS, VSS, Solvent Extractables and Phenolics.

Associated Facilities : DOC, TOC, Ammonia plus ammonium, Total Kjeldahl Nitrogen, nitrate plus nitrite, TSS, VSS, Total Phosphorus, Solvent Extractables, Phenolics.

TABLE 7

Priority Pollutants:

Fossil and Nuclear TGS & Associated Facilities : Copper, Zinc, Iron (EPA, Pre-regulation data)

EPG Sector List Priority Pollutants > = Long Term Medians (LTM, Table 8)

WEEKLY

Conventional Pollutants:

Certain effluents (some or all of the following):

Fossil-fuelled TGS : Total Kjeldahl Nitrogen, nitrates plus nitrites, Total Phosphorus, Solvent Extractables, Phenolics.

Nuclear-powered TGS : Ammonia plus ammonium, Total Kjeldahl Nitrogen, Total Phosphorus, Solvent Extractables, Phenolics.

Associated facilities : Kjeldahl nitrogen, nitrates plus nitrites, total phosphorus, TSS, Solvent Extractables, Phenolics.

Priority Pollutants:

Fossil and Nuclear TGS & Associated Facilities : EPG Sector List Priority Pollutants List > Method Detection Limit (MDL) < LTM. (e.g. Phenol > 2.4 ug/L)

TABLE 7

MONTHLY

Conventional Pollutants:

Certain effluents (some or all of the following) :

Fossil-fuelled TGS : Ammonia plus ammonium, Total Kjeldahl Nitrogen, Nitrates plus Nitrites, DOC, TOC, phenolics and solvent extractables.

Nuclear-powered TGS : Nitrates plus nitrites, solvent extractables.

Associated facilities : Ammonia plus ammonium, Total Kjeldahl Nitrogen, Nitrates plus nitrites, TOC, total phosphorus, TSS, phenolics, and solvent extractables.

Priority Pollutants:

Fossil and Nuclear TGS & Associated Facilities : Complete analytical test group (ATG) if one member of group > MDL.

(e.g. ATG 20 if Phenol > 2.4 ug/L)

MONTHLY

Biomonitoring : Toxicity - Rainbow Trout (LC50 96h)

Daphnia magna (LC50 48 h)

QUARTERLY

Characterization / Open Characterization : All conventional pollutants (see Table 3) EPG Sector Priority Pollutants (see Table 3) Open characterization - organic and elemental.

TABLE 7

B) EVENT DISCHARGE **(Oily water separators - nuclear, effluent lagoon, treated coal pile effluent)**

MONTHLY / EVENT

Fossil-fuelled TGS : pH, specific conductance, ammonia plus ammonium, Total Kjeldahl Nitrogen, nitrates plus nitrites, DOC, TOC, Total phosphorus, TSS, Total metals, Iron, hydrides, hexavalent chromium, mercury, phenolics, solvent extractables, and neutral chlorinated extractables.

Nuclear-powered TGS : pH, DOC, TOC, Specific Conductance, TSS, VSS, Copper, Zinc, Iron, Phenolics, Solvent Extractables.

Heavy Water Plants : pH, DOC, TOC, Total phosphorus, specific conductance, TSS, Aluminum, Copper, Molybdenum, Mercury, Sulphide, Solvent Extractables, PCB's, (Diethanolamine).

MONTHLY / EVENT

Biomonitoring : Toxicity - Rainbow Trout (LC50 96 h)
Daphnia magna (LC50 48 h)

C) BATCH DISCHARGE EFFLUENT

: see schedules C and G

D) ONCE-THROUGH COOLING WATER (OTCW)

DAILY

Fossil and Nuclear TGS & Associated Facilities : intake/discharge temperature required on condenser OTCW only.

TABLE 7

MONTHLY

Conventional Pollutants:

Fossil and Nuclear TGS & Associated Facilities	: pH, Specific conductance, DOC, TOC, TSS, Total Phosphorus, Solvent Extractables, Additional parameters > MDL.
Hydraulic Stations	: pH, Specific Conductance, DOC, TOC, TSS, Total Phosphorus, Solvent Extractables.

Priority Pollutants:

Fossil and Nuclear TGS & Associated Facilities	: all parameters > MDL
Hydraulic Stations	: PCB's, Best professional judgement.

QUARTERLY

Biomonitoring	: Toxicity - Rainbow Trout (LC50 96h) Daphnia magna (LC50 48 h)

E) STORM WATER EFFLUENT

MONTHLY / EVENT

The following parameters will be monitored:

ATG. No.	FOSSIL	NUCLEAR	ASSOCIATED FACILITIES
3 (pH)	xxx	xxx	xxx
5a (DOC)	xxx	xxx	xxx
5b (TOC)	xxx	xxx	xxx
6 (Tot P)	xxx	xxx	xxx
7 (Sp. Cond)	xxx	xxx	xxx
8 (TSS)	xxx	xxx	xxx
25 (Sol. Extr.)	xxx	xxx	xxx
Remainder EPGS Sector List (Only)	If > MDL	If > MDL	If > MDL

TABLE 7

F) COAL PILE EFFLUENT

MONTHLY / EVENT : 12 data points per year.

The following parameters shall be monitored: pH, Specific Conductance, ammonia plus ammonium, total Kjeldahl nitrogen, nitrates plus nitrites, DOC, TOC, total phosphorus, TSS, Total metals, Iron, hydrides, hexavalent chromium, mercury, phenolics, solvent extractables and neutral chlorinated extractables.

G) WASTE DISPOSAL SITE EFFLUENT

DURING DISCHARGE

Associated facilities : pH, specific conductance, ammonia plus ammonium, Total Kjeldahl Nitrogen, nitrates plus nitrites, DOC, TOC, Total Phosphorus, TSS, Phenols, Solvent Extractables, > MDL.

H) POTENTIALLY CONTAMINATED BUILDING EFFLUENT / EQUIPMENT CLEANING EFFLUENT

DURING DISCHARGE

The following core parameters to be monitored:

pH, specific conductance, DOC, TOC, Total phosphorus, TSS, Copper, Zinc, Iron, solvent extractables, > MDL.

I) EMERGENCY OVERFLOWS

DURING DISCHARGE

The following parameters require monitoring:

pH, specific conductance, ammonia plus ammonium, Total Kjeldahl Nitrogen, nitrates plus nitrites, DOC,TOC,TSS, Total Phosphorus, Solvent Extractables, Copper, Zinc, Iron.

TABLE 8 - U.S. EPA BATEA PERFORMANCE DATA (OPTION 2)

POLLUTANT OR POLLUTANT PROPERTY BY PRIORITY POLLUTANT CLASSES	MEDIAN OF LONGTERM WEIGHTED MEANS (PPB)
Halogenated Methanes (C1)	
Carbon tetrachloride	10
Chloroform	10
Methylene chloride	10
Methyl chloride	50
Bromoform	10
Bromodichloromethane	10
Chlorinated C2's	
1,2-Dichloroethane	13.4
1,1,1-Trichloroethane	10
Hexachloroethane	10
1,1,2-Trichloroethane	10
Chloroethane	50
1,1-Dichloroethylene	10
1,2-trans-Dichloroethylene	10
Tetrachloroethylene	10.7
Trichloroethylene	10
Vinyl chloride	10
Chlorinated C3's	
1,2-Dichloropropane	59.4
1,3-Dichloropropylene	36.9
Chlorinated C4's	
Hexachlorobutadiene	10
Chloroalkyl Ethers	
bis(2-chloroisopropyl)ether	10
Metals	
Antimony	158
Arsenic	25.1
Chromium	64.5
Copper	27.7
Lead	100
Mercury	2.03
Nickel	166
Selenium	12
Zinc	69.5
Miscellaneous	
Acrylonitrile	50
Cyanide	64.9

POLLUTANT OR POLLUTANT PROPERTY BY PRIORITY POLLUTANT CLASSES	MEDIAN OF LONGTERM WEIGHTED MEANS (PPB)
Aromatics	
Benzene	10
Ethylbenzene	10
Toluene	10
Polyaromatics	
Acenaphthene	10
Fluoranthene	13.2
Naphthalene	10
Benzo(a)anthracene	10
Benzo(a)pyrene	10
3,4-Benzofluoranthene	10
Chrysene	10
Acenaphthylene	10
Anthracene	10
Fluorene	10
Phenanthrene	10
Pyrene	12.5
Chloroaromatics	
Chlorobenzene	15.9
1,2,4-Trichlorobenzene	26.4
Hexachlorobenzene	10
o-Dichlorobenzene	52.3
m-Dichlorobenzene	21.3
p-Dichlorobenzene	10
Phthalate Esters	
bis(2-Ethylhexyl)phthalate	19.6
Di-n-butyl phthalate	22.2
Diethyl phthalate	44.4
Dimethyl phthalate	10
Nitroaromatics	
2,4-Dinitrotoluene	219
2,6-Dinitrotoluene	255
Nitrobenzene	206
Benzidines	
3,3-Dichlorobenzidine	262
Phenols	
2,4-Dimethylphenol	10.6
Phenol	10

TABLE 8 - U.S. EPA BATEA PERFORMANCE DATA (OPTION 2)

POLLUTANT OR POLLUTANT PROPERTY BY PRIORITY POLLUTANT CLASSES	MEDIAN OF LONGTERM WEIGHTED MEANS (PPB)
Nitrophenols	
2-Nitrophenol	24
4-Nitrophenol	50
2,4-Dinitrophenol	50
4,6-Dinitro-o-cresol	20
Chlorophenols	
2,4,6-Trichlorophenol	65.9
2-Chlorophenol	10
2,4-Dichlorophenol	16.9
Pentachlorophenol	50

TABLE 9 - PROBABILITY OF DETECTING AT LEAST ONE SAMPLE ABOVE THE DETECTION LIMIT

SINGLE SAMPLE PROBABILITY OF		NUMBER OF SAMPLES								RATIO OF DETECT/ (DETECT + NON-DETECT) (D/D+ND)
DETECT (P)	NON-DETECT (Q)	12	11	10	9	8	6	4	2	
0.5	0.5	0.999	0.999	0.999	0.998	0.996	0.984	0.937	0.750	1/2
0.4	0.6	0.998	0.996	0.994	0.990	0.983	0.953	0.870	0.640	2/5
0.3	0.7	0.986	0.980	0.972	0.960	0.942	0.882	0.759	0.510	3/10
0.2	0.8	0.931	0.914	0.893	0.866	0.832	0.738	0.590	0.360	1/5
0.1	0.9	0.717	0.686	0.651	0.613	0.569	0.468	0.344	0.190	1/10
0.05	0.95	0.460	0.431	0.401	0.370	0.337	0.265	0.185	0.098	1/20
0.02	0.98	0.215	0.199	0.183	0.166	0.149	0.114	0.078	0.040	1/50
0.01	0.99	0.113	0.105	0.095	0.086	0.077	0.058	0.039	0.019	1/100

The table shows the probability of a sample with a parameter above MDL for the number of samples tested.

TABLE 10 - SUMMARY OF RECOMMENDATIONS RELATED TO MONITORING (SERIES 300) FROM ENVIRONMENT CANADA'S ENVIRONMENTAL CODE OF PRACTICE

NUMBER	SUBJECT	SUMMARY OF RECOMMENDATION
R301	**Monitoring Facilities** - Access	Design so that they can be safely accessed and used.
R302	**Once-Through Cooling** - Continuous Monitors	Provide for i) continuous flow and temperature monitors and grab sampling of once-through cooling and auxiliary cooling streams, ii) TRC readings at condenser and heat exchangers outlets, if chlorine used.
R303	**Once-Through Cooling** - Periodic Monitoring	Provide for periodic biological sampling of cooling water forebay and discharge, and fish by-pass.
R304	**Discharged Wastewaters** - Monitors	Provide for i) representative sampling, ii) integrated flow monitors (±10% accuracy), iii) on-line pH, TRC or other monitors.
R305	**Inplant Waters** - Monitoring Considerations	Consider flow monitors and sampling facilities for in-plant water streams.
R306	**Groundwaters** - Monitors	Provide permanent piezometer/well system at coal storage and waste disposal sites.
R307	**Groundwaters** - Pre-operational Monitoring	Conduct pre-operational monitoring starting at least one year before construction.
R308	**Aquatic Environment** - Pre-operational Monitoring	Conduct pre-operational monitoring starting at least one year before construction to determine baseline data for biota, water quality and sediment.
R309	**Environmental Data** - Processing	Provide appropriate facilities for analyses, alarms, and data storage and retrieval.

PART C

THE DRAFT EFFLUENT MONITORING REGULATION
FOR THE
ELECTRIC POWER GENERATION SECTOR

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REGULATION MADE UNDER THE

ENVIRONMENTAL PROTECTION ACT

EFFLUENT MONITORING - ELECTRIC POWER GENERATION SECTOR

DEFINITIONS

1.- (1) In this Regulation,

"boiler blowdown effluent" means the minimum discharge of recirculating boiler water for the purpose of controlling boiler water level and for discharging materials contained in the boiler water, the further buildup of which would cause concentrations of these materials that are harmful to boiler operation;

"boiler blowdown effluent sampling point" means a location in a boiler blowdown effluent stream situated,

(a) before the place of discharge to a surface watercourse, and

(b) upstream of any significant contaminant masking or significant dilution by any other effluent;

"boiler blowdown effluent stream" means a boiler blowdown effluent which flows through an open or closed channel;

"characterization" means the analysis of a sample to identify and quantify all of the parameters in Schedule AA;

"coal pile effluent" means untreated effluent collected from a coal pile area;

"coal pile effluent sampling point" means a location in a coal pile effluent stream situated,

(a) before the place of discharge to a surface watercourse,

(b) prior to treatment, and

(c) upstream of any significant contaminant masking or significant dilution by any other effluent;

"coal pile effluent stream" means coal pile effluent which flows through an open or closed channel;

"equipment cleaning effluent" means an effluent resulting from the chemical cleaning of boilers, heat exchangers and other equipment and washing down of air preheaters, boilers and the wet layup of boilers;

"equipment cleaning effluent sampling point" means a location in an equipment cleaning effluent stream situated,

(a) before the place of discharge to a surface watercourse, and

(b) upstream of any significant contaminant masking or significant dilution by any other effluent;

"equipment cleaning effluent stream" means an equipment cleaning effluent which flows through an open or closed channel;

"event discharge effluent" means a discharge of process effluent which occurs on an event basis;

"event discharge effluent sampling point" means a location in an event discharge effluent stream situated,

(a) before the place of discharge to a surface watercourse, and

(b) upstream of any significant contaminant masking or significant dilution by any another effluent;

"event discharge effluent stream" means an event discharge effluent which flows through an open or closed channel;

"General Effluent Monitoring Regulation" means Ontario Regulation 695/88;

"once-through cooling water sampling point" means a location in a once-through cooling water effluent stream situated before the place of discharge to a surface watercourse and downstream of additions of process effluent to that stream, if any, or at a point in the effluent stream approved by the Director;

"potentially contaminated building effluent" means any effluent resulting from equipment drains, floor drains or trenches that collect in a sump and that may be contaminated by leaks, spills or equipment and floor washdowns;

"potentially contaminated building effluent sampling point" means a location in a potentially contaminated building effluent stream situated,

(a) before the place of discharge to a surface watercourse,

(b) after final treatment, and

(c) upstream of any significant contaminant masking or significant dilution by any other effluent;

"potentially contaminated building effluent stream" means a potentially contaminated building effluent which flows through an open or closed channel;

"process change" means any change in equipment, production process or treatment process;

"station" means a plant as defined in the General Effluent Monitoring Regulation;

(2) The definitions in section 1 of the General Effluent Monitoring Regulation that are not redefined in this Regulation apply to this Regulation.

(3) In construing the General Effluent Monitoring Regulation, "plant" includes the stations named in subsection 3(2).

PURPOSE

2. The purpose of this Regulation is to establish a data base on effluent quality in the electric power generation sector that will be used, along with other pertinent information, to develop effluent limits for that sector and to quantify the mass loadings of monitored contaminants being discharged into surface watercourses.

APPLICATION

3.- (1) This Regulation applies only with respect to the stations listed in subsection (2) and only with respect to effluent streams named in the subsector-specific and site-specific monitoring schedules for those stations.

(2) The site-specific and subsector-specific monitoring schedule for each station is as follows:

Station	Location	Owner as of May 9, 1989	Schedule
Atikokan TGS	Atikokan	Ontario Hydro	A
J.C. Keith TGS	Windsor	Ontario Hydro	A
Lakeview TGS	Mississauga	Ontario Hydro	A
Lambton TGS	Courtright	Ontario Hydro	A
Lennox TGS	S. Fredericksberg	Ontario Hydro	A
Nanticoke TGS	Nanticoke	Ontario Hydro	A
R.L. Hearn TGS	Toronto	Ontario Hydro	A
Thunder Bay TGS	Thunder Bay	Ontario Hydro	A
Aguasabon GS	Aguasabon River	Ontario Hydro	B
Arnprior GS	Madawaska River	Ontario Hydro	B
Decew NF 23 GS	Welland Canal	Ontario Hydro	B
Pine Portage GS	Nipigon River	Ontario Hydro	B
Silver Falls GS	Kaministikwia River	Ontario Hydro	B
Sir Adam Beck 2 GS	Niagara River	Ontario Hydro	B
Bruce NGS-A	Tiverton	Ontario Hydro	C
Bruce NGS-B	Tiverton	Ontario Hydro	C
Darlington NGS	Bowmanville	Ontario Hydro	C
Pickering NGS-A	Pickering	Ontario Hydro	C
Pickering NGS-B	Pickering	Ontario Hydro	C
Bruce Heavy Water Plants	Tiverton	Ontario Hydro	D
Bruce Nuclear Power Development - Services	Tiverton	Ontario Hydro	E
Bruce Nuclear Waste Storage Site	Tiverton	Ontario Hydro	E
Bruce Sewage Processing Plant	Tiverton	Ontario Hydro	E
Darlington NGS (under Construction)	Bowmanville	Ontario Hydro	F

Chalk River Nuclear Laboratories	Chalk River	Atomic Energy of Canada Ltd.	G
Douglas Point WMF	Tiverton	Atomic Energy of Canada Ltd.	H
Nuclear Power Demonstration WMF	Rolphton	Atomic Energy of Canada Ltd.	I

(3) This Regulation is a Sectoral Effluent Monitoring Regulation within the meaning of the General Effluent Monitoring Regulation.

(4) Each direct discharger shall carry out the monitoring obligations, including the sampling, analysis, toxicity testing, flow measurement, recording and reporting obligations of this Regulation, in accordance with the General Effluent Monitoring Regulation.

(5) Each direct discharger shall carry out the monitoring obligations referred to in subsection (4) for boiler blowdown effluent in accordance with the obligations for process effluent.

(6) Each direct discharger shall carry out the monitoring obligations referred to in subsection (4) for coal pile effluent in accordance with the obligations for storm water.

(7) Each direct discharger shall carry out the monitoring obligations referred to in subsection (4) for equipment cleaning effluent and potentially contaminated building effluent in accordance with the obligations for waste disposal site effluent.

(8) Each direct discharger shall carry out the monitoring obligations refered to in subsection (4) for event discharge effluent in accordance with the obligations for process effluent.

(9) An obligation on a direct discharger to do a thing under this Regulation is discharged if another person has done it on the direct discharger's behalf.

(10) Each direct discharger shall notify the Director in writing of any change of name or ownership of its station within thirty days after the day this Regulation comes into force or within thirty days after any such change.

SAMPLING POINTS

4.- (1) Each direct discharger shall establish the following sampling points:

1. A batch discharge effluent sampling point on each batch discharge effluent stream.
2. A boiler blowdown effluent sampling point on each boiler blowdown effluent stream.
3. A coal pile effluent sampling point on each coal pile effluent stream.
4. A combined effluent sampling point on each combined effluent stream.
5. An emergency overflow effluent sampling point on each emergency overflow effluent stream.
6. An equipment cleaning effluent sampling point on each equipment cleaning effluent stream.
7. An event discharge effluent sampling point on each event discharge effluent stream.
8. A once-through cooling water sampling point on each once-through cooling water effluent stream.
9. A potentially contaminated building effluent sampling point on each potentially contaminated building effluent stream.
10. A process effluent sampling point on each process effluent stream.
11. A storm water sampling point on each storm water effluent stream.
12. A waste disposal site effluent sampling point on each waste disposal site effluent stream.
13. A once-through cooling water temperature measurement sampling point on each once-through cooling water intake and discharge where temperature monitoring is required.

(2) Each direct discharger shall use the sampling points established under subsection (1) for all sampling required by this Regulation, except that a direct discharger may use alternate sampling points where that is acceptable to the Director.

(3) Where each direct discharger has more than one storm water catchment area with the same land use, that direct discharger is not required to

establish storm water sampling points for those catchment areas as required under subsection (1).11, but shall instead establish storm water sampling points only on storm water effluent streams that originate from the most likely to be contaminated catchment areas for the respective land uses.

CHARACTERIZATION / OPEN CHARACTERIZATION

5.- (1) Each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsections (3) and (4) from each process effluent, combined effluent, event discharge effluent, boiler blowdown effluent and batch discharge effluent sampling point of that discharger,

(a) on at least one operating day in each quarter for all analytical test groups; and

(b) once within thirty days after every process change that is expected to significantly and adversely affect the quality of that effluent.

(2) Clause (1)(b) does not apply to experimental process changes of less than thirty days in duration.

(3) Each direct discharger shall perform characterization analyses on each set of samples collected under clauses (1)(a) and (1)(b) for the parameters in each analytical test group in Column 2 of Schedule AA.

(4) Each direct discharger shall perform open characterization analyses on each set of samples collected under clauses (1)(a) and (1)(b).

(5) Despite clause (1)(a), a direct discharger is only required to fulfill the requirements of that clause in four consecutive quarters.

(6) For the purposes of clause (1)(a), samples collected after the first sample collected under clause (1)(a) shall be collected no sooner than six weeks and no later than four months after the previous sampling.

DAILY MONITORING

6.- (1) At each process effluent, combined effluent,batch discharge effluent and boiler blowdown effluent sampling point, each direct discharger shall,

- (a) continuously sample and analyze, using an on-line analyzer, for the parameters in analytical test groups 3 and 7 in Schedule AA; or
- (b) during each operating day, collect a set of samples and analyze the samples for the parameters specified in clause (1)(a).

(2) During each operating day, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (3) from each process effluent, combined effluent, batch discharge effluent and boiler blowdown effluent sampling point of that discharger and from which they have not been collected under subsection (1).

(3) Each direct discharger shall analyze each set of samples collected under subsection (2) for the parameters specified at a daily frequency for the respective effluent stream in the respective monitoring schedule.

(4) Subsections (1) to (3) do not apply in respect of any day in which a sufficient volume of sample cannot be collected because of the collection of inspection samples.

THRICE-WEEKLY MONITORING

7.- (1) On at least three separate operating days in each week, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (2) from each process effluent, combined effluent, batch discharge effluent and boiler blowdown effluent sampling point of that discharger.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified at a thrice weekly frequency for the respective effluent stream in the respective monitoring schedule.

WEEKLY MONITORING

8.- (1) On at least one operating day in each week on the same day that a set of samples is collected under section 7(1) for that effluent stream, each direct discharger shall collect a set of samples sufficient to perform all the analyses required by subsection (2) from each process effluent, combined effluent, batch discharge effluent and boiler blowdown effluent sampling point of that discharger.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified at a weekly frequency for the respective effluent stream in the respective monitoring schedule.

(3) For the purposes of subsection (1), samples collected after the first sample collected under subsection (1) shall be collected no sooner than four days after the previous sampling.

MONTHLY MONITORING

9.- (1) On at least one operating day in each month on the same day that a set of samples is collected under subsection 7(1) from that effluent stream, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (2) from each process effluent, combined effluent, batch discharge effluent and boiler blowdown effluent sampling point of that discharger.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified at a monthly frequency for the respective effluent stream in the respective monitoring schedule.

(3) For the purposes of subsection (1), samples collected after the first sample collected under subsection (1) shall be collected no sooner than two weeks after the previous sampling.

EVENT DISCHARGE EFFLUENT MONITORING

10.- (1) On at least one day in each month, during each discharge of event discharge effluent, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (3) from each event discharge effluent sampling point of that discharger.

(2) For the purposes of subsection (1), where a direct discharger has failed to collect a set of samples from a event discharge effluent sampling point of that discharger during a discharge of event discharge effluent in any month, that discharger shall collect a compensating set of samples sufficient to perform all of the analyses required by subsection (3) from that sampling point for a subsequent discharge for which a set of samples is not collected under subsection (1).

(3) Each direct discharger shall analyze each set of samples collected under subsections (1) and (2) for the parameters specified for the respective effluent stream in the respective monitoring schedule.

(4) In the event of no discharge in any month the direct discharger at Lambton TGS shall collect the required monthly event discharge sample from upstream of and within five feet of the event discharge sampling point for that discharger.

MONITORING - BOILER BLOWDOWN

11.- (1) Where a direct discharger's station has multiple boiler blowdown effluent streams, that direct discharger shall follow the sampling schedule required under subsection (2).

(2) During each month, each direct discharger shall collect and analyze each set of samples required under sections 6 to 9 from one or more boiler blowdown effluent sampling points such that each boiler blowdown effluent stream at a station is monitored over two or more months.

(3) Each direct discharger shall collect samples at a location in a boiler blowdown effluent stream in accordance with Section 3, subsection (4)(c),(d) or (e) of the General Effluent Monitoring Regulation.

MONITORING - ONCE-THROUGH COOLING WATER

12.- (1) On at least one operating day in each month on the same day that a set of samples are collected under subsection 9(1), each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (2) from each once-through cooling water sampling point of that discharger.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified at a monthly frequency for the respective effluent stream in the respective monitoring schedule.

(3) For the purposes of subsection (1), samples collected after the first sample collected under subsection (1) shall be collected no sooner than two weeks after the previous sampling.

(4) Subject to subsection (5), at each once-through cooling water temperature measurement point, each direct discharger shall continuously measure for the parameter in analytical test group E2 in Schedule AA.

(5) If the direct discharger is unable to carry out the requirements of subsection (4), at a once-through cooling water temperature measurement point, that direct discharger shall measure every hour for each constituent effluent stream for the parameter specified in subsection (4) using a method acceptable to the Director.

MONTHLY MONITORING - STORM WATER AND COAL PILE EFFLUENT

13.- (1) On at least one day in each month, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (3) from each storm water and coal pile effluent sampling point on each affected storm water and coal pile effluent stream of that discharger during a discharge from that stream.

(2) For the purposes of subsection (1), where a direct discharger has failed to collect a set of samples from a storm water or coal pile effluent sampling point of that discharger during any month, that discharger shall collect a compensating set of samples sufficient to perform all of the analyses required by subsection (3) from that sampling point for a subsequent storm event for which a set of samples is not collected under subsection (1).

(3) Each direct discharger shall analyze each set of samples collected under subsections (1) and (2) for the parameters specified at a monthly frequency for the respective effluent stream in the respective monitoring schedule.

(4) Each direct discharger shall make every reasonable effort to ensure that at least two sets of samples from each storm water and coal pile effluent sampling point of that discharger are collected under subsection (1) in the period of January to May during a thaw.

MONTHLY MONITORING - WASTE DISPOSAL SITE EFFLUENT

14.- (1) On one day in each month or at the time of discharge, whichever is less frequent, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (2) from each waste disposal site effluent sampling point on each affected waste disposal site effluent stream of that discharger during a discharge of waste disposal site effluent.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified for the respective effluent stream in the respective monitoring schedule.

EVENT MONITORING - EQUIPMENT CLEANING EFFLUENT AND POTENTIALLY CONTAMINATED BUILDING EFFLUENT

15.- (1) On one day in each month or at the time of discharge, whichever is less frequent, each direct discharger shall collect a set of samples sufficient to perform all the analyses required in subsection (2) from each equipment cleaning effluent and potentially contaminated building effluent sampling point on each affected equipment cleaning and potentially contaminated building effluent stream of that discharger.

(2) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified in the respective monitoring schedule.

EVENT MONITORING - EMERGENCY OVERFLOW

16.- (1) During each emergency overflow, each direct discharger shall collect a set of samples sufficient to perform all of the analyses required by subsection (3) from each emergency overflow effluent sampling point on each affected emergency overflow effluent stream of that discharger.

(2) Subsection (1) does not apply if the collection of samples would result in extraordinary danger to health or safety.

(3) Each direct discharger shall analyze each set of samples collected under subsection (1) for the parameters specified in the respective monitoring schedule.

QUALITY CONTROL MONITORING

17.- (1) Each direct discharger shall select, for the purpose of this section, a sampling point on the process effluent stream in respect of which the site-specific or subsector specific monitoring schedule for that discharger's station indicates the largest number of parameters to be analyzed in analytical test groups 16 to 20, 23, 24 and 27.

(2) If a direct discharger's station has no process effluent stream in respect of which a parameter in analytical test groups 16 to 20, 23, 24 and 27 is required to be analyzed, the discharger shall instead select a sampling point on the process effluent stream in respect of which the site-specific or subsector specific monitoring schedule indicates the largest number of parameters to be analyzed in all analytical test groups.

(3) If a direct discharger's station has no process effluent stream, the discharger shall instead select a sampling point on combined effluent stream in respect of which the site-specific or subsector specific monitoring schedule for that discharger's station indicates the largest number of parameters to be analyzed in analytical test groups 16 to 20, 23, 24 and 27.

(4) If a direct discharger's station has no process effluent stream, and has no combined effluent stream in respect of which a parameter in analytical test groups 16 to 20, 23, 24 and 27 is required to be analyzed, the discharger shall instead select a sampling point on the combined effluent stream in respect of which the site-specific or subsector specific monitoring schedule indicates the largest number of parameters to be analyzed in all analytical test groups.

(5) Each direct discharger shall prepare each travelling spiked blank sample required to be analyzed by this section with a standard solution containing at least the parameters to be analyzed for.

(6) For the collection of samples required under subsections (7) and (8) where the direct discharger collects a composite sample using an automatic composite sampling device, the direct discharger may instead of collecting a duplicate sample, remove an aliquot from each sample container used to collect the sample.

(7) Once in each month, on a day on which samples are collected under section 9, each direct discharger shall collect a duplicate sample for each sample required to be collected on that day by sections 6 and 7 from the sampling point selected under subsections (1) to (4), and shall analyze the set of duplicate samples for the parameters indicated in the daily and thrice weekly columns, for the stream from which the set was collected, of the site-specific or subsector specific monitoring schedule for that discharger's station.

(8) Once in each quarter, on a day on which duplicate samples are collcted under subsection (7), each direct discharger shall collect a duplicate sample for each sample required to be collected on that day by sections 8 and 9 from the sampling point selected under subsections (1) to (4), and shall analyze the set of duplicate samples for the parameters indicated in the weekly and monthly columns, for the stream from which the set was collected, of the site-specific or subsector specific monitoring schedule for that discharger's station.

(9) Once in each month, on a day on which samples are collected under section 9, each direct discharger shall prepare and process a travelling blank sample for each sample required to be collected on that day by sections 6 and 7 from sampling point selected under subsections (1) to (4), and shall analyze the set of travelling blank samples for the parameters indicated in the daily and thrice-weekly columns, for the stream from which the set was collected, of the site-specific or subsector specific monitoring schedule for that discharger's station.

(10) Despite subsection (9), a direct discharger need not analyze a travelling blank for parameters in analytical test groups 3 and 8.

(11) Once in each quarter, ona day on which duplicate samples are collected under subsection (7), each direct discharger shall prepare and process a travelling blank sample for each sample required to be collected on that day by sections 8 and 9 from sampling point selected under subsections (1) to (4), and shall analyze the set of travelling blank samples for the parameters indicated in the weekly and monthly columns, for the stream

from which the set was collected, of the site-specific or subsector specific monitoring schedule for that discharger's station.

(12) Once in each month, on a day on which samples are collected under section 9, each direct discharger shall prepare and process a travelling spiked blank sample from each sample required to be collected on that day by sections 6 and 7 from the sampling point selected under subsections (1) to (4), and shall analyze the set of travelling spiked blank samples for the parameters in analytical test groups 16 to 20, 23, 24 and 27 indicated in the daily and thrice-weekly columns, for the stream from which the set was collected, of the site-specific or subsector-specific monitoring schedule for that discharger's station.

(13) Once in each quarter, on a day on which samples are collected under subsection (7), each direct discharger shall prepare and process a travelling spiked blank sample from each sample required to be collected on that day by sections 8 and 9 from the sampling point selected under subsections (1) to (4), and shall analyze the set of travelling spiked blank samples for the parameters in analytical test groups 16 to 20, 23, 24 and 27 indicated in the weekly and monthly columns, for the stream from which the set was collected, of the site-specific or subsector-specific monitoring schedule for that discharger's station.

TOXICITY TESTING

18.- (1) Each direct discharger shall collect a sample from each process effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent sampling point of that discharger once in each month on the same day as one of the sets of samples required by sections 9 and 10 is collected, and shall perform a fish toxicity test on each of the samples required by this subsection.

(2) If the tests performed under subsection (1) on a sample collected from a process effluent, combined effluent or batch discharge effluent sampling point in three consecutive months result in mortality for no more than two out of ten fish at all effluent concentrations, a direct discharger may thereafter collect the samples and perform the tests required by subsection (1) on a 100 per cent undiluted sample only.

(3) If a test performed under subsection (2) results in mortality for more than two out of ten fish, subsection (2) ceases to apply and continues not to apply until the tests performed under subsection (1) in a further three consecutive months result in mortality for no more than two out of ten fish at all effluent concentrations.

(4) Once in each month on the same day as the sample required by subsection (1) is collected, each direct discharger shall collect a sample from each process effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent sampling point of that discharger and shall perform thereon a Daphnia magna acute lethality toxicity test.

(5) Each direct discharger shall collect the sample required by subsection (4) together in the same container or set of containers with the fish toxicity test sample.

(6) Each direct discharger shall collect a sample from each once-through cooling water sampling point of that discharger once in each quarter on the same day as one of the sets of samples required by section 12 is collected and shall perform, on each of the samples required by this subsection,

(a) a fish toxicity test; and

(b) a Daphnia magna acute lethality toxicity test.

(7) If the initial tests performed under subsection (6)(a) result in mortality for no more than two out of ten fish for the fish toxicity test at each effluent concentration, a direct discharger may thereafter collect the samples and perform tests required by subsection (6)(a) on 100 per cent undiluted test solutions only.

(8) Subsection (7) ceases to apply in the event that the test performed under it results in mortality for more than two out of ten fish in the 100 percent undiluted test solution.

(9) Despite subsection (6), a direct discharger is only required to fulfill the requirements of that subsection in four consecutive quarters.

FLOW MEASUREMENT

19.- (1) Each direct discharger shall continuously measure the flow of each process effluent stream of that discharger at a location or set of locations representative of the flow at the sampling point established for that stream, and shall record the measured flow.

(2) Where the flow of a process effluent stream cannot be continuously measured on any day because of equipment malfunction and all

reasonable care has been taken to avoid and correct the malfunction, the direct discharger may fulfil the requirement of subsection (1) by estimating the total volume of effluent discharged that operating day from that stream and recording that estimate.

(3) Each direct discharger shall measure or calculate the flow of each boiler blowdown effluent stream of that discharger at a location or set of locations representative of the flow at the sampling point established for that stream, and shall record the measured or calculated flow.

(4) Each direct discharger shall, at the time of each sampling,

(a) measure or estimate the flow of each once-through cooling water, combined effluent, event discharge effluent and batch discharge effluent streams of that discharger; and

(b) measure or estimate the duration and approximate volume of each discharge of storm water, coal pile effluent, emergency overflow effluent, equipment cleaning effluent, potentially contaminated building effluent and waste disposal site effluent of that discharger, at a location or set of locations representative of the flow at the sampling point established for that stream and shall record the measured or estimated flow.

(5) Despite section 6, subsection (6) of the General Effluent Monitoring Regulation, each direct discharger shall use methods, devices or calculations for the measurement or estimation of the flow of a batch discharge effluent or an event discharge effluent stream that are capable of accuracy to within plus or minus 7 percent of the actual flow.

REPORTING

20.- (1) Within seven days after this subsection comes into force, each direct discharger shall submit four copies of an initial report to the Director in respect of that direct discharger's station.

(2) Each direct discharger shall report any significant changes to the information submitted under subsection (1) to the Director within thirty days after the end of the month during which the change occurs.

(3) With respect to each sample, each direct discharger shall report to the Director the date on which the sample was collected, the method used to collect the sample and the results of all analyses performed by or on

behalf of the direct discharger under sections 5 to 18 of this Regulation, and under subsection 4(18) of the General Effluent Monitoring Regulation, including all positive numerical values at or above the analytical method detection limits calculated by the laboratory performing the analysis.

(4) Each direct discharger shall report to the Director the flow measurement information recorded in respect of each process effluent, combined effluent, batch discharge effluent, event discharge effluent, boiler blowdown effluent and once-through cooling water effluent stream of that discharger and the date on which the flow was measured.

(5) Each direct discharger shall report to the Director the date and duration of each storm event, the amount of rainfall during that event and the date, location, duration and approximate volume of each discharge of storm water and coal pile effluent for which a set of samples is collected under section 13.

(6) Each direct discharger shall report to the Director the date, location, duration and approximate volume of each discharge of potentially contaminated building effluent, equipment cleaning effluent, waste disposal site effluent and emergency overflow effluent to a surface watercourse for which a set of samples is collected under sections 14, 15 and 16.

(7) Each direct discharger shall submit the reports referred to in subsections (4) to (6) to the Director in writing within sixty days after the day on which the information was recorded.

(8) Except for samples collected from storm water, coal pile effluent, waste disposal site effluent, potentially contaminated building effluent and emergency overflow effluent sampling points, at least thirty days before the collection of the first sample in each month, each direct discharger shall submit to the Director a schedule of sampling dates and times by location for all monthly and characterization sampling in that month.

(9) Each direct discharger shall follow the schedule submitted by the direct discharger under subsection (8) but if the schedule cannot be followed as submitted, the direct discharger shall notify the Director promptly of any change in dates or times.

(10) Within sixty days after the end of each quarter, once in each quarter, each direct discharger shall submit a report to the Director summarizing the quantities of chemicals added to once-through cooling water in the previous quarter and stating the dates and locations at which these

additions occurred.

(11) Subject to subsection 3(6) of the General Effluent Monitoring Regulation, each direct discharger shall submit a report to the Director describing the variation in daily flow for a period of at least six months for each process effluent stream from which samples are collected other than by means of an automatic flow proportional composite sampling device, no later than nine months after this section comes into force.

(12) The report referred to in subsection (11) shall include the raw data and calculation methods used to produce the report.

(13) Each direct discharger shall keep records of all sampling required by this Regulation, including, for each sample, the date time of collection, sampling procedures used, the amount of sample dilution by preservative if dilution exceeds one per cent, and any incident likely to affect an analytical result.

(14) Each direct discharger shall develop a maintenance and calibration schedule for all sampling and flow measurement equipment and shall record the results of all maintenance and calibration performed.

(15) Each direct discharger shall keep records of all analytical methods used.

(16) Each direct discharger shall submit a report to the Director detailing the date, duration and cause of each sampling, toxicity testing, analytical and flow measurement malfunction or other problem, and remedial action taken, within sixty days after the day on which the malfunction or problem occurs.

(17) Each direct discharger shall keep for two years all records and reports required by this Regulation to be kept or made.

(18) Each direct discharger shall submit to the Director a copy of the routine radionuclide monitoring reports provided to the licensing authority.

(19) Within sixty days after the end of each month, once each month,each direct discharger shall submit a report to the Director detailing the daily average once-through cooling water effluent temperature and temperature rise only where once through cooling water effluent

temperature is being measured in accordance with the respective monitoring schedules.

(20) Within sixty days after the end of each quarter, once each quarter, all hydraulic generating station dischargers owned by Ontario Hydro shall submit a report to the Director detailing the monthy consumption of oil and grease, seal oils, lubricants, transformer oils, hydraulic fluids and chemicals.

TIMING

21.- (1) This Regulation, except subsection 20(1), comes into force on the first day of the sixth month following filing.

(2) Subsection 20(1) comes into force on the 1st day of the fourth month following filing.

(3) Sections 5, 7 to 16 and section 18 and subsections 20(5), 20(6) and 20(8) are revoked one year after the day this regulation comes into force.

(4) Sections 4 through 18 of this Regulation cease to apply to effluent of a direct discharger when the Director issues an approval under the Ontario Water Resources Act containing a condition referring to subsection 21(4) of this Regulation with respect to that effluent which specifies the sections which have ceased to apply.

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
#	ANALYTICAL TEST GROUP NAME	PARAMETERS	CAS #s †
1	Chemical Oxygen Demand	Chemical oxygen demand (COD)	N/A
2	Total cyanide	Total cyanide	57-12-5
3	Hydrogen ion (pH)	Hydrogen ion (pH)	N/A
4a	Nitrogen	Ammonia plus Ammonium	N/A
		Total Kjeldahl nitrogen	N/A
4b		Nitrate + Nitrite	N/A
5a	Organic carbon	Dissolved organic carbon (DOC)	N/A
5b		Total organic carbon (TOC) (NOTE 1)	N/A
6	Total phosphorus	Total phosphorus	7723-14-0
7	Specific conductance	Specific conductance	N/A
8	Suspended solids	Total suspended solids (TSS)	N/A
		Volatile suspended solids (VSS)	N/A
9	Total metals	Aluminum	7429-90-5
		Beryllium	7440-41-7
		Boron (NOTE A)	7440-42-8
		Cadmium	7440-43-9
		Chromium	7440-47-3
		Cobalt	7440-48-4
		Copper	7440-50-8
		Lithium (NOTE B)	7439-93-2
		Lead	7439-92-1
		Molybdenum	7439-98-7

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s †
9	Total metals (continued)	Nickel	7440-02-0
		Silver	7440-22-4
		Strontium (NOTE C)	7440-24-6
		Thallium	7440-28-0
		Vanadium	7440-62-2
		Zinc	7440-66-6
10	Hydrides	Antimony	7440-36-0
		Arsenic	7440-38-2
		Selenium	7782-49-2
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)	7440-47-3
12	Mercury	Mercury	7439-97-6
14	Phenolics (4AAP)	Phenolics (4AAP)*	N/A
15	Sulphide	Sulphide	N/A
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	79-34-5
		1,1,2-Trichloroethane	79-00-5
		1,1-Dichloroethane	75-34-3
		1,1-Dichloroethylene	75-35-4
		1,2-Dichlorobenzene	95-50-1
		1,2-Dichloroethane (Ethylene dichloride)	107-06-2
		1,2-Dichloropropane	78-87-5
		1,3-Dichlorobenzene	541-73-1
		1,4-Dichlorobenzene	106-46-7
		Bromodichloromethane (NOTE D)	75-27-4
		Bromoform	75-25-2
		Bromomethane	74-83-9
		Carbon tetrachloride	56-23-5

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP		PARAMETERS	CAS #s †
#	NAME		
16	Volatiles, Halogenated (continued)	Chlorobenzene	108-90-7
		Chloroform	67-66-3
		Chloromethane	74-87-3
		Cis-1,3-Dichloropropylene	10061-01-5
		Dibromochloromethane	124-48-1
		Ethylene dibromide	106-93-4
		Methylene chloride	75-09-2
		Tetrachloroethylene (Perchloroethylene)	127-18-4
		Trans-1,2-Dichloroethylene	156-60-5
		Trans-1,3-Dichloropropylene	10061-02-6
		Trichloroethylene	79-01-6
		Trichlorofluoromethane	75-69-4
		Vinyl chloride (Chloroethylene)	75-01-4
17	Volatiles, Non-Halogenated	Benzene	71-43-2
		Styrene	100-42-5
		Toluene	108-88-3
		o-Xylene	95-47-6
		m-Xylene and p-Xylene	108-38-3 & 106-42-3
19	Extractables, Base Neutral	Acenaphthene	83-32-9
		5-nitro Acenaphthene	602-87-9
		Acenaphthylene	208-96-8
		Anthracene	120-12-7
		Benz(a)anthracene	56-55-3
		Benzo(a)pyrene	50-32-8
		Benzo(b)fluoranthene	205-99-2
		Benzo(g,h,i)perylene	191-24-2
		Benzo(k)fluoranthene	207-08-9
		Biphenyl (NOTE E)	92-52-4
		Camphene	79-92-5

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

COLUMN 1		COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s †
19	Extractables, Base Neutral (continued)	1-Chloronaphthalene	90-13-1
		2-Chloronaphthalene	91-58-7
		Chrysene	218-01-9
		Dibenz(a,h)anthracene	53-70-3
		Fluoranthene	206-44-0
		Fluorene	86-73-7
		Indeno(1,2,3-cd)pyrene	193-39-5
		Indole	120-72-9
		1-Methylnaphthalene	90-12-0
		2-Methylnaphthalene	91-57-6
		Naphthalene	91-20-3
		Perylene	198-55-0
		Phenanthrene	85-01-8
		Pyrene	129-00-0
		Benzyl butyl phthalate	85-68-7
		Bis(2-ethylhexyl) phthalate	117-81-7
		Di-n-butyl phthalate	84-74-2
		4-Bromophenyl phenyl ether	101-55-3
		4-Chlorophenyl phenyl ether	7005-72-3
		Bis(2-chloroisopropyl)ether	108-60-1
		Bis(2-chloroethyl)ether	111-44-4
		2,4-Dinitrotoluene	121-14-2
		2,6-Dinitrotoluene	606-20-2
		Bis(2-chloroethoxy)methane	111-91-1
		Diphenylamine	122-39-4
		Diphenyl Ether (NOTE F)	101-84-8
		N-Nitrosodiphenylamine	86-30-6
		N-Nitrosodi-n-propylamine	621-64-7

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s †
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol	4901-51-3
		2,3,4,6-Tetrachlorophenol	58-90-2
		2,3,5,6-Tetrachlorophenol	935-95-5
		2,3,4-Trichlorophenol	15950-66-0
		2,3,5-Trichlorophenol	933-78-8
		2,4,5-Trichlorophenol	95-95-4
		2,4,6-Trichlorophenol	88-06-2
		2,4-Dimethyl phenol	105-67-9
		2,4-Dinitrophenol	51-28-5
		2,4-Dichlorophenol	120-83-2
		2,6-Dichlorophenol	87-65-0
		4,6-Dinitro-o-cresol	534-52-1
		2-Chlorophenol	95-57-8
		4-Chloro-3-methylphenol	59-50-7
		4-Nitrophenol	100-02-7
		m-Cresol	108-39-4
		o-Cresol	95-48-7
		p-Cresol	106-44-5
		Pentachlorophenol	87-86-5
		Phenol	108-95-2

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP #	NAME	PARAMETERS	CAS #s †
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	634-66-2
		1,2,3,5-Tetrachlorobenzene	634-90-2
		1,2,4,5-Tetrachlorobenzene	95-94-3
		1,2,3-Trichlorobenzene	87-61-6
		1,2,4-Trichlorobenzene	120-82-1
		2,4,5-Trichlorotoluene	6639-30-1
		Hexachlorobenzene	118-74-1
		Hexachlorobutadiene	87-68-3
		Hexachlorocyclopentadiene	77-47-4
		Hexachloroethane	67-72-1
		Octachlorostyrene	29082-74-4
		Pentachlorobenzene	608-93-5
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
		Octachlorodibenzo-p-dioxin	326-88-7
		Octachlorodibenzofuran	Unavailable
		Total heptachlorinated dibenzo-p-dioxins	Unavailable
		Total heptachlorinated dibenzofurans	Unavailable
		Total hexachlorinated dibenzo-p-dioxins	34465-46-8
		Total hexachlorinated dibenzofurans	Unavailable
		Total pentachlorinated dibenzo-p-dioxins	Unavailable
		Total pentachlorinated dibenzofurans	Unavailable
		Total tetrachlorinated dibenzo-p-dioxins	Unavailable
		Total tetrachlorinated dibenzofurans	Unavailable
25	Solvent Extractables	Oil and grease	
27	PCBs (Total)	PCBs (Total)	Unavailable
E1††	Metals	Iron	7439-89-6

SCHEDULE AA - MONITORING PARAMETERS - ELECTRIC POWER GENERATION SECTOR

	COLUMN 1	COLUMN 2	COLUMN 3
ANALYTICAL TEST GROUP		PARAMETERS	CAS #s †
#	NAME		
E2††	Temperature	Temperature	
		Temperature Rise	
E3††	Chlorine (TRC)	Chlorine	
E4††	Diethanolamine	Diethanolamine	

† CAS #s = Chemical Abstract Service Registry Numbers

* 4AAP = 4-amino antipyrine method

†† Analytical test group to be monitored in accordance with the Sampling Principles listed in Schedule BB and the Analytical Principles and Analytical Method Detection Limits listed in Schedule CC.

NOTE 1: Total organic carbon is to be analyzed only if the total suspended solids concentration is greater than 15 mg/L.

NOTE 2: Chromium (Hexavalent) is to be analyzed only if the total chromium concentration is greater than 1.0 mg/L.

NOTE A: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 9 in Schedule 2 and in Part A of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.05 mg/L.

NOTE B: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 9 in Schedule 2 and in Part A of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.05 mg/L.

NOTE C: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 9 in Schedule 2 and in Part A of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.02 mg/L.

NOTE D: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 16 in Schedule 2 and in Part B of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.8 µg/L.

NOTE E: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 19 in Schedule 2 and in Part B of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.6 µg/L.

NOTE F: Follow the Sampling & Analytical Principles outlined for Analytical Test Group 19 in Schedule 2 and in Part B of Schedule 3 in the General Effluent Monitoring Regulation with an Analytical Method Detection Limit of 0.4 µg/L.

SCHEDULE BB - SAMPLING PRINCIPLES

Column 1	Column 2	Column 3	Column 4	Col. 5	Column 6	Column 7
ANALYTICAL TEST GROUP	LABORATORY SAMPLE CONTAINER	LABORATORY CONTAINER PRE-TREATMENT	TEST SPECIFIC SAMPLING PRECAUTIONS	MIN. SAM. VOL.	PRESERVATION METHOD	MAX. STORAGE TIME (DAYS)
Metals E1	Sample containers and caps/ liners must be composed only of one or more of the following materials: fluorocarbon resin, polyethylene terephthalate, glass, polystyrene, polypropylene, high or low density polyethylene. Metallic foil should not be used.	If pre-treatment necessary, soak overnight in a 5% solution of nitric acid (HNO3), followed by several rinses in distilled water.	If sample is high (>5%) in hydrocarbons or organic solvents, use glass or fluorocarbon resin sample container only.	100mL	Add nitric acid (HNO3) (containing <1 mg/L of all analytes) to lower pH to <2.	30
Temperature E2						
Chlorine (TRC) E3						
Diethanolamine E4						

SCHEDULE CC - ANALYTICAL PRINCIPLES & ANALYTICAL METHOD DETECTION LIMITS

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
ANALYTICAL TEST GROUP #	PARAMETERS CONVENTIONAL AND METAL PARAMETERS	SAMPLE PREPARATION METHOD PRINCIPLES	INSTRUMENTAL MEASUREMENT METHOD PRINCIPLES	ALTERNATE INSTRUMENTAL MEASUREMENT METHOD PRINCIPLES	ANALYTICAL METHOD DETECTION LIMITS
E1	Iron	Nitric evaporation or aqua regia digestion	Atomic absorption spectrometry and/or Emission Spectrometry - Inductively Coupled Plasma (ICP) or Direct Current Argon Plasma Spectrometry (DCP)	Polarography via the method of standard addition in the presence of suitable electrolyte	0.02 mg/L
E2	Temperature				
	Temperature Rise				
E3	Chlorine (TRC)				
E4	Diethanolamine				

LEGEND FOR SCHEDULES A TO I

NOTE 1: Total organic carbon is to be analyzed only if the total suspended solids concentration is greater than 15 milligrams/litre.

NOTE 2: Chromium (Hexavalent) is to be analyzed only if the total chromium concentration is greater than 1.0 milligram/litre.

NOTE 3: Analyze for selenium in Nanticoke Thermal Generating Station's (TGS) Ash Transport Water System Effluent thrice weekly, remaining stations, weekly only.

NOTE 4: Analyze for chloroform in Thunder Bay Thermal Generating Station's (TGS) Water Treatment Plant Neutralization Sump and Ash Transport Water System effluents weekly, remaining stations, monthly only.

NOTE 5: Analyze for 2-methylnaphthalene and naphthalene in R. L. Hearn Thermal Generating Station's (TGS) Storm Water only.

NOTE 6: Analyze for chlorine (TRC) at representative condenser box discharge during chlorination (where practiced - subject to MOE protocol availability prior to promulgation).

NOTE 7: Analyze Boiler Blowdown for ammonia plus ammonium on a thrice weekly basis if stations are using ammonia in boiler water, otherwise weekly.

NOTE 8: Analyze Boiler Blowdown for DOC/TOC on a thrice weekly basis at stations using morpholine in boilers, otherwise weekly.

NOTE 9: Analyze Radioactive Liquid Waste Management System (RLWMS) Tanks for cadmium and lead on a weekly basis at Pickering Nuclear Generating Station (NGS) only, otherwise monthly.

NOTE 10: No Toxicity tests required for water treatment plant neutralization sump effluent that discharge to ash transport water systems or into combined effluent at BNPDS.

NOTE 11: Analyze for ATG 24 monthly at Pickering NGS RLWMS Tanks only.

NOTE 12: Analyze for ATG 24 monthly at R. L. Hearn TGS only.

NOTE 13: No toxicity tests required for oily water separators at Bruce NGS-A and Bruce NGS-B when discharging to RLWMS Tanks.

ATG - Analytical Test Group

D - Daily

TW - Thrice weekly

W - Weekly

M - Monthly

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Process Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 10)				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**												
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX				XXX			
4a	Nitrogen	Ammonia plus Ammonium		XXX						XXX		XXX		
		Total Kjeldahl nitrogen			XXX				XXX				XXX	
4b		Nitrate + Nitrite			XXX				XXX					XXX
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX				XXX						XXX
5b		Total organic carbon (TOC) (NOTE 1)		XXX				XXX						XXX
6	Total phosphorus	Total phosphorus			XXX				XXX			XXX		
7	Specific conductance	Specific conductance	XXX				XXX				XXX			
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)		XXX			XXX					XXX		
		Volatile suspended solids (VSS)												
9	Total metals	Aluminum			XXX				XXX				XXX	
		Beryllium			XXX				XXX				XXX	
		Boron			XXX				XXX				XXX	
		Cadmium			XXX				XXX				XXX	
		Chromium			XXX				XXX				XXX	
		Cobalt			XXX				XXX				XXX	
		Copper		XXX				XXX				XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Process Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly (NOTE 10)				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**												
9	Total metals (continued)	Lead			XXX				XXX				XXX	
		Lithium			XXX				XXX				XXX	
		Molybdenum			XXX				XXX				XXX	
		Nickel			XXX				XXX				XXX	
		Silver			XXX				XXX				XXX	
		Strontium			XXX				XXX				XXX	
		Thallium			XXX				XXX				XXX	
		Vanadium			XXX				XXX				XXX	
		Zinc		XXX				XXX				XXX		
10	Hydrides	Antimony				XXX			XXX					
		Arsenic			XXX				XXX					
		Selenium (NOTE 3)				XXX		XXX						
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			XXX				XXX				XXX	
12	Mercury	Mercury			XXX				XXX					
14	Phenolics (4AAP)	Phenolics (4AAP)				XXX				XXX			XXX	
15	Sulphide	Sulphide												
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				XXX				XXX				
		1,1,2-Trichloroethane				XXX				XXX				
		1,1-Dichloroethane				XXX				XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Process Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 10)				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene				XXX				XXX				
		1,2-Dichlorobenzene				XXX				XXX				
		1,2-Dichloroethane (Ethylene dichloride)				XXX				XXX				
		1,2-Dichloropropane				XXX				XXX				
		1,3-Dichlorobenzene				XXX				XXX				
		1,4-Dichlorobenzene				XXX				XXX				
		Bromodichloromethane				XXX				XXX				
		Bromoform				XXX				XXX				
		Bromomethane				XXX				XXX				
		Carbon tetrachloride				XXX				XXX				
		Chlorobenzene				XXX				XXX				
		Chloroform (NOTE 4)			XXX				XXX					
		Chloromethane				XXX				XXX				
		Cis-1,3-Dichloropropylene				XXX				XXX				
		Dibromochloromethane				XXX				XXX				
		Ethylene dibromide				XXX				XXX				
		Methylene chloride				XXX				XXX				
		Tetrachloroethylene (Perchloroethylene)				XXX				XXX				
		Trans-1,2-Dichloroethylene				XXX				XXX				
		Trans-1,3-Dichloropropylene				XXX				XXX				
		Trichloroethylene				XXX				XXX				
		Trichlorofluoromethane				XXX				XXX				
		Vinyl chloride (Chloroethylene)				XXX				XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Process Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly (NOTE 10)				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
19	Extractables, Base Neutral	Acenaphthene												
		5-nitro Acenaphthene												
		Acenaphthylene												
		Anthracene												
		Benz(a)anthracene												
		Benzo(a)pyrene												
		Benzo(b)fluoranthene												
		Benzo(g,h,i)perylene												
		Benzo(k)fluoranthene												
		Camphene												
		1-Chloronaphthalene												
		2-Chloronaphthalene												
		Chrysene												
		Dibenz(a,h)anthracene												
		Fluoranthene												
		Fluorene												
		Indeno(1,2,3-cd)pyrene												
		Indole												
		1-Methylnaphthalene												
		2-Methylnaphthalene (NOTE 5)												
		Naphthalene (NOTE 5)												
		Perylene												
		Phenanthrene												
		Pyrene												
		Benzyl butyl phthalate												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Process Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly (NOTE 10)				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
19	Extractables, Base Neutral (continued)	Bis(2-ethylhexyl) phthalate												
		Di-n-butyl phthalate												
		4-Bromophenyl phenyl ether												
		4-Chlorophenyl phenyl ether												
		Bis(2-chloroisopropyl)ether												
		Bis(2-chloroethyl)ether												
		2,4-Dinitrotoluene												
		2,6-Dinitrotoluene												
		Bis(2-chloroethoxy)methane												
		Diphenylamine												
		N-Nitrosodiphenylamine												
		N-Nitrosodi-n-propylamine												
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene												
		1,2,3,5-Tetrachlorobenzene												
		1,2,4,5-Tetrachlorobenzene												
		1,2,3-Trichlorobenzene												
		1,2,4-Trichlorobenzene												
		2,4,5-Trichlorotoluene												
		Hexachlorobenzene												
		Hexachlorobutadiene												
		Hexachlorocyclopentadiene												
		Hexachloroethane												
		Octachlorostyrene												
		Pentachlorobenzene												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Ash Transport Water System				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Process Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 10)				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**												
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin												
		Octachlorodibenzo-p-dioxin												
		Octachlorodibenzofuran												
		Total heptachlorinated dibenzo-p-dioxins												
		Total heptachlorinated dibenzofurans												
		Total hexachlorinated dibenzo-p-dioxins												
		Total hexachlorinated dibenzofurans												
		Total pentachlorinated dibenzo-p-dioxins												
		Total pentachlorinated dibenzofurans												
		Total tetrachlorinated dibenzo-p-dioxins												
		Total tetrachlorinated dibenzofurans												
25	Solvent Extractables	Oil and grease			XXX				XXX					XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)												
E1	Metals	Iron		XXX				XXX				XXX		
E2	Temperature	Temperature												
		Temperature Rise												
E3	Chlorine (TRC)	Chlorine (NOTE 6)												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**						
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX		XXX	XXX		XXX
4a	Nitrogen	Ammonia plus Ammonium		XXX	XXX	XXX		
		Total Kjeldahl nitrogen		XXX	XXX	XXX		
4b		Nitrate + Nitrite		XXX	XXX	XXX		
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX		XXX	XXX		XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX		XXX	XXX		XXX
6	Total phosphorus	Total phosphorus		XXX	XXX	XXX		XXX
7	Specific conductance	Specific conductance	XXX		XXX	XXX		XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX		XXX	XXX		XXX
		Volatile suspended solids (VSS)	XXX					
9	Total metals	Aluminum		XXX	XXX	XXX		XXX
		Beryllium		XXX	XXX	XXX		XXX
		Boron		XXX	XXX	XXX		XXX
		Cadmium		XXX	XXX	XXX		XXX
		Chromium		XXX	XXX	XXX		XXX
		Cobalt		XXX	XXX	XXX		XXX
		Copper		XXX	XXX	XXX		XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
9	Total metals (continued)	Lead		XXX	XXX	XXX		XXX
		Lithium		XXX	XXX	XXX		XXX
		Molybdenum		XXX	XXX	XXX		XXX
		Nickel		XXX	XXX	XXX		XXX
		Silver		XXX	XXX	XXX		XXX
		Strontium		XXX	XXX	XXX		XXX
		Thallium		XXX	XXX	XXX		XXX
		Vanadium		XXX	XXX	XXX		XXX
		Zinc		XXX	XXX	XXX		XXX
10	Hydrides	Antimony			XXX	XXX		
		Arsenic			XXX	XXX		
		Selenium (NOTE 3)			XXX	XXX		
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)		XXX	XXX	XXX		XXX
12	Mercury	Mercury			XXX	XXX		
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX		XXX	XXX		XXX
15	Sulphide	Sulphide						
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		XXX				
		1,1,2-Trichloroethane		XXX				
		1,1-Dichloroethane		XXX				

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene		XXX				
		1,2-Dichlorobenzene		XXX				
		1,2-Dichloroethane (Ethylene dichloride)		XXX				
		1,2-Dichloropropane		XXX				
		1,3-Dichlorobenzene		XXX				
		1,4-Dichlorobenzene		XXX				
		Bromodichloromethane		XXX				
		Bromoform		XXX				
		Bromomethane		XXX				
		Carbon tetrachloride		XXX				
		Chlorobenzene		XXX				
		Chloroform (NOTE 4)		XXX				XXX
		Chloromethane		XXX				
		Cis-1,3-Dichloropropylene		XXX				
		Dibromochloromethane		XXX				
		Ethylene dibromide		XXX				
		Methylene chloride		XXX				
		Tetrachloroethylene (Perchloroethylene)		XXX				
		Trans-1,2-Dichloroethylene		XXX				
		Trans-1,3-Dichloropropylene		XXX				
		Trichloroethylene		XXX				
		Trichlorofluoromethane		XXX				
		Vinyl chloride (Chloroethylene)		XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
19	Extractables, Base Neutral	Acenaphthene						
		5-nitro Acenaphthene						
		Acenaphthylene						
		Anthracene						
		Benz(a)anthracene						
		Benzo(a)pyrene						
		Benzo(b)fluoranthene						
		Benzo(g,h,i)perylene						
		Benzo(k)fluoranthene						
		Camphene						
		1-Chloronaphthalene						
		2-Chloronaphthalene						
		Chrysene						
		Dibenz(a,h)anthracene						
		Fluoranthene						
		Fluorene						
		Indeno(1,2,3-cd)pyrene						
		Indole						
		1-Methylnaphthalene						
		2-Methylnaphthalene (NOTE 5)						
		Naphthalene (NOTE 5)						
		Perylene						
		Phenanthrene						
		Pyrene						
		Benzyl butyl phthalate						

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
19	Extractables, Base Neutral (continued)	Bis(2-ethylhexyl) phthalate						
		Di-n-butyl phthalate						
		4-Bromophenyl phenyl ether						
		4-Chlorophenyl phenyl ether						
		Bis(2-chloroisopropyl)ether						
		Bis(2-chloroethyl)ether						
		2,4-Dinitrotoluene						
		2,6-Dinitrotoluene						
		Bis(2-chloroethoxy)methane						
		Diphenylamine						
		N-Nitrosodiphenylamine						
		N-Nitrosodi-n-propylamine						
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene			XXX	XXX		
		1,2,3,5-Tetrachlorobenzene			XXX	XXX		
		1,2,4,5-Tetrachlorobenzene			XXX	XXX		
		1,2,3-Trichlorobenzene			XXX	XXX		
		1,2,4-Trichlorobenzene			XXX	XXX		
		2,4,5-Trichlorotoluene			XXX	XXX		
		Hexachlorobenzene			XXX	XXX		
		Hexachlorobutadiene			XXX	XXX		
		Hexachlorocyclopentadiene			XXX	XXX		
		Hexachloroethane			XXX	XXX		
		Octachlorostyrene			XXX	XXX		
		Pentachlorobenzene			XXX	XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator		Coal Pile Treatment System Effluent	-	-	
		EFFLUENT STREAM:	Process Effluent		Event Discharge Effluent	Coal Pile Effluent	Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly		Monthly	None	Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly		Quarterly	None	None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly		Quarterly	None	None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly		Quarterly	None	None	
		FREQUENCY OF SAMPLING:	TW	M	during discharge	Monthly	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin						
		Octachlorodibenzo-p-dioxin						
		Octachlorodibenzofuran						
		Total heptachlorinated dibenzo-p-dioxins						
		Total heptachlorinated dibenzofurans						
		Total hexachlorinated dibenzo-p-dioxins						
		Total hexachlorinated dibenzofurans						
		Total pentachlorinated dibenzo-p-dioxins						
		Total pentachlorinated dibenzofurans						
		Total tetrachlorinated dibenzo-p-dioxins						
		Total tetrachlorinated dibenzofurans						
25	Solvent Extractables	Oil and grease	XXX		XXX	XXX		XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)						
E1	Metals	Iron		XXX	XXX	XXX		XXX
E2	Temperature	Temperature					XXX	
		Temperature Rise					XXX	
E3	Chlorine (TRC)	Chlorine (NOTE 6)					XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**			
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX	XXX
		Volatile suspended solids (VSS)			
9	Total metals	Aluminum	XXX	XXX	XXX
		Beryllium	XXX	XXX	
		Boron	XXX		
		Cadmium	XXX		
		Chromium	XXX	XXX	XXX
		Cobalt	XXX	XXX	XXX
		Copper	XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
9	Total metals (continued)	Lead	XXX	XXX	
		Lithium	XXX		
		Molybdenum	XXX	XXX	XXX
		Nickel	XXX		
		Silver	XXX		
		Strontium	XXX		
		Thallium	XXX		
		Vanadium	XXX		
		Zinc	XXX	XXX	XXX
10	Hydrides	Antimony		XXX	
		Arsenic		XXX	
		Selenium (NOTE 3)			
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			
12	Mercury	Mercury		XXX	
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	XXX	
15	Sulphide	Sulphide			
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane			
		1,1,2-Trichloroethane			
		1,1-Dichloroethane			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			-	-	-
EFFLUENT STREAM:			Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None	None
FREQUENCY OF SAMPLING:			during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene			
		1,2-Dichlorobenzene			
		1,2-Dichloroethane (Ethylene dichloride)			
		1,2-Dichloropropane			
		1,3-Dichlorobenzene			
		1,4-Dichlorobenzene			
		Bromodichloromethane			
		Bromoform			
		Bromomethane			
		Carbon tetrachloride			
		Chlorobenzene			
		Chloroform (NOTE 4)			
		Chloromethane			
		Cis-1,3-Dichloropropylene			
		Dibromochloromethane			
		Ethylene dibromide			
		Methylene chloride			
		Tetrachloroethylene (Perchloroethylene)			
		Trans-1,2-Dichloroethylene			
		Trans-1,3-Dichloropropylene			
		Trichloroethylene			
		Trichlorofluoromethane	XXX	XXX	
		Vinyl chloride (Chloroethylene)			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			-	-	-
EFFLUENT STREAM:			Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None	None
FREQUENCY OF SAMPLING:			during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
19	Extractables, Base Neutral	Acenaphthene			
		5-nitro Acenaphthene			
		Acenaphthylene			
		Anthracene			
		Benz(a)anthracene			
		Benzo(a)pyrene			
		Benzo(b)fluoranthene			
		Benzo(g,h,i)perylene			
		Benzo(k)fluoranthene			
		Camphene			
		1-Chloronaphthalene			
		2-Chloronaphthalene			
		Chrysene			
		Dibenz(a,h)anthracene			
		Fluoranthene			
		Fluorene			
		Indeno(1,2,3-cd)pyrene			
		Indole			
		1-Methylnaphthalene			
		2-Methylnaphthalene (NOTE 5)		XXX	
		Naphthalene (NOTE 5)		XXX	
		Perylene			
		Phenanthrene			
		Pyrene			
		Benzyl butyl phthalate			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
19	Extractables, Base Neutral (continued)	Bis(2-ethylhexyl) phthalate			
		Di-n-butyl phthalate			
		4-Bromophenyl phenyl ether			
		4-Chlorophenyl phenyl ether			
		Bis(2-chloroisopropyl)ether			
		Bis(2-chloroethyl)ether			
		2,4-Dinitrotoluene			
		2,6-Dinitrotoluene			
		Bis(2-chloroethoxy)methane			
		Diphenylamine			
		N-Nitrosodiphenylamine			
		N-Nitrosodi-n-propylamine			
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene			
		1,2,3,5-Tetrachlorobenzene			
		1,2,4,5-Tetrachlorobenzene			
		1,2,3-Trichlorobenzene			
		1,2,4-Trichlorobenzene		XXX	XXX
		2,4,5-Trichlorotoluene			
		Hexachlorobenzene			
		Hexachlorobutadiene		XXX	
		Hexachlorocyclopentadiene			
		Hexachloroethane			
		Octachlorostyrene			
		Pentachlorobenzene			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			-	-	-
EFFLUENT STREAM:			Equipment Cleaning Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None	None
FREQUENCY OF SAMPLING:			during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin		XXX	
		Octachlorodibenzo-p-dioxin		XXX	
		Octachlorodibenzofuran		XXX	
		Total heptachlorinated dibenzo-p-dioxins		XXX	
		Total heptachlorinated dibenzofurans		XXX	
		Total hexachlorinated dibenzo-p-dioxins		XXX	
		Total hexachlorinated dibenzofurans		XXX	
		Total pentachlorinated dibenzo-p-dioxins		XXX	
		Total pentachlorinated dibenzofurans		XXX	
		Total tetrachlorinated dibenzo-p-dioxins		XXX	
		Total tetrachlorinated dibenzofurans		XXX	
25	Solvent Extractables	Oil and grease	XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)		XXX	
E1	Metals	Iron	XXX	XXX	XXX
E2	Temperature	Temperature			
		Temperature Rise			
E3	Chlorine (TRC)	Chlorine (NOTE 6)			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**	
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX
		Total Kjeldahl nitrogen	XXX
4b		Nitrate + Nitrite	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX
6	Total phosphorus	Total phosphorus	XXX
7	Specific conductance	Specific conductance	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX
		Volatile suspended solids (VSS)	
9	Total metals	Aluminum	
		Beryllium	
		Boron	
		Cadmium	
		Chromium	
		Cobalt	
		Copper	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
	ANALYTICAL TEST GROUP	PARAMETERS TO BE ANALYZED	
9	Total metals (continued)	Lead	
		Lithium	
		Molybdenum	
		Nickel	
		Silver	
		Strontium	
		Thallium	
		Vanadium	
		Zinc	XXX
10	Hydrides	Antimony	
		Arsenic	
		Selenium (NOTE 3)	
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)	
12	Mercury	Mercury	
14	Phenolics (4AAP)	Phenolics (4AAP)	
15	Sulphide	Sulphide	
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane	
		1,1,2-Trichloroethane	
		1,1-Dichloroethane	

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**	
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene	
		1,2-Dichlorobenzene	
		1,2-Dichloroethane (Ethylene dichloride)	
		1,2-Dichloropropane	
		1,3-Dichlorobenzene	
		1,4-Dichlorobenzene	
		Bromodichloromethane	
		Bromoform	
		Bromomethane	
		Carbon tetrachloride	
		Chlorobenzene	
		Chloroform (NOTE 4)	
		Chloromethane	
		Cis-1,3-Dichloropropylene	
		Dibromochloromethane	
		Ethylene dibromide	
		Methylene chloride	
		Tetrachloroethylene (Perchloroethylene)	
		Trans-1,2-Dichloroethylene	
		Trans-1,3-Dichloropropylene	
		Trichloroethylene	
		Trichlorofluoromethane	
		Vinyl chloride (Chloroethylene)	

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**	
19	Extractables, Base Neutral	Acenaphthene	
		5-nitro Acenaphthene	
		Acenaphthylene	
		Anthracene	
		Benz(a)anthracene	
		Benzo(a)pyrene	
		Benzo(b)fluoranthene	
		Benzo(g,h,i)perylene	
		Benzo(k)fluoranthene	
		Camphene	
		1-Chloronaphthalene	
		2-Chloronaphthalene	
		Chrysene	
		Dibenz(a,h)anthracene	
		Fluoranthene	
		Fluorene	
		Indeno(1,2,3-cd)pyrene	
		Indole	
		1-Methylnaphthalene	
		2-Methylnaphthalene (NOTE 5)	
		Naphthalene (NOTE 5)	
		Perylene	
		Phenanthrene	
		Pyrene	
		Benzyl butyl phthalate	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED	
19	Extractables, Base Neutral (continued)	Bis(2-ethylhexyl) phthalate	
		Di-n-butyl phthalate	
		4-Bromophenyl phenyl ether	
		4-Chlorophenyl phenyl ether	
		Bis(2-chloroisopropyl)ether	
		Bis(2-chloroethyl)ether	
		2,4-Dinitrotoluene	
		2,6-Dinitrotoluene	
		Bis(2-chloroethoxy)methane	
		Diphenylamine	
		N-Nitrosodiphenylamine	
		N-Nitrosodi-n-propylamine	
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene	
		1,2,3,5-Tetrachlorobenzene	
		1,2,4,5-Tetrachlorobenzene	
		1,2,3-Trichlorobenzene	
		1,2,4-Trichlorobenzene	
		2,4,5-Trichlorotoluene	
		Hexachlorobenzene	
		Hexachlorobutadiene	
		Hexachlorocyclopentadiene	
		Hexachloroethane	
		Octachlorostyrene	
		Pentachlorobenzene	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE A - FOSSIL FUELLED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**	
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin	
		Octachlorodibenzo-p-dioxin	
		Octachlorodibenzofuran	
		Total heptachlorinated dibenzo-p-dioxins	
		Total heptachlorinated dibenzofurans	
		Total hexachlorinated dibenzo-p-dioxins	
		Total hexachlorinated dibenzofurans	
		Total pentachlorinated dibenzo-p-dioxins	
		Total pentachlorinated dibenzofurans	
		Total tetrachlorinated dibenzo-p-dioxins	
		Total tetrachlorinated dibenzofurans	
25	Solvent Extractables	Oil and grease	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)	
E1	Metals	Iron	XXX
E2	Temperature	Temperature	
		Temperature Rise	
E3	Chlorine (TRC)	Chlorine (NOTE 6)	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE B - HYDRAULIC POWERED GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Once Through Cooling Water	Transformer Yard Drain	Sump Effluent
		EFFLUENT STREAM:	Once Through Cooling Water	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Quarterly	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	M	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium		XXX	
		Total Kjeldahl nitrogen		XXX	
4b		Nitrate + Nitrite		XXX	
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX	XXX
		Volatile suspended solids (VSS)			
9	Total metals	Aluminum		XXX	XXX
		Beryllium			XXX
		Boron			
		Cadmium		XXX	
		Chromium			XXX
		Cobalt			XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE B - HYDRAULIC POWERED GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Once Through Cooling Water	Transformer Yard Drain	Sump Effluent
		EFFLUENT STREAM:	Once Through Cooling Water	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Quarterly	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	M	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
9	Total metals (continued)	Copper		XXX	XXX
		Lithium			
		Lead			XXX
		Molybdenum		XXX	
		Nickel			XXX
		Silver			
		Strontium			
		Thallium			
		Vanadium			XXX
		Zinc		XXX	XXX
10	Hydrides	Antimony			
		Arsenic		XXX	
		Selenium			
14	Phenolics (4AAP)	Phenolics (4AAP)		XXX	XXX
17	Volatiles, Non-Halogenated	Benzene			
		Styrene			
		Toluene			
		o-Xylene		XXX	
		m-Xylene and p-Xylene		XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE B - HYDRAULIC POWERED GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Once Through Cooling Water	Transformer Yard Drain	Sump Effluent
EFFLUENT STREAM:			Once Through Cooling Water	Storm Water Effluent	Potentially Contaminated Building Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			Quarterly	None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None	None
FREQUENCY OF SAMPLING:			M	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**			
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol			
		2,3,4,6-Tetrachlorophenol			
		2,3,5,6-Tetrachlorophenol			
		2,3,4-Trichlorophenol			
		2,3,5-Trichlorophenol			
		2,4,5-Trichlorophenol			
		2,4,6-Trichlorophenol			
		2,4-Dimethylphenol			
		2,4-Dinitrophenol			
		2,4-Dichlorophenol			
		2,6-Dichlorophenol			
		4,6-Dinitro-o-cresol			
		2-Chlorophenol			
		4-Chloro-3-methylphenol			
		4-Nitrophenol			
		m-Cresol			
		o-Cresol			
		p-Cresol			
		Pentachlorophenol			
		Phenol		XXX	
25	Solvent Extractables	Oil and grease	XXX	XXX	XXX
27	Polychlorinated Biphenyls	(PCBs) (Total)	XXX	XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE B - HYDRAULIC POWERED GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Once Through Cooling Water	Transformer Yard Drain	Sump Effluent
		EFFLUENT STREAM:	Once Through Cooling Water	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Quarterly	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	M	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED			
E1	Metals	Iron			XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX				XXX			
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)			XXX				XXX			XXX		
		Total Kjeldahl nitrogen			XXX				XXX				XXX	
4b		Nitrate + Nitrite		XXX						XXX				XXX
5a	Organic carbon	Dissolved organic carbon (DOC) (NOTE 8)		XXX				XXX				XXX		
5b		Total organic carbon (TOC) (NOTE 1)		XXX				XXX				XXX		
6	Total phosphorus	Total phosphorus			XXX			XXX						
7	Specific conductance	Specific conductance	XXX				XXX				XXX			
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)		XXX				XXX				XXX		
		Volatile suspended solids (VSS)												
9	Total metals	Aluminum			XXX				XXX				XXX	
		Beryllium				XXX				XXX				XXX
		Boron				XXX				XXX				XXX
		Cadmium (NOTE 9)				XXX			XXX					XXX
		Chromium			XXX					XXX			XXX	
		Cobalt				XXX				XXX			XXX	
		Copper		XXX				XXX				XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
9	Total metals (continued)	Lead (NOTE 9)			XXX				XXX					XXX
		Lithium				XXX				XXX				XXX
		Molybdenum			XXX					XXX			XXX	
		Nickel			XXX					XXX			XXX	
		Silver				XXX				XXX				XXX
		Strontium			XXX					XXX				XXX
		Thallium				XXX				XXX				XXX
		Vanadium				XXX				XXX				XXX
		Zinc		XXX				XXX				XXX		
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			XXX					XXX			XXX	
12	Mercury	Mercury												
14	Phenolics (4AAP)	Phenolics (4AAP)											XXX	
15	Sulphide	Sulphide							XXX					
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				XXX				XXX				
		1,1,2-Trichloroethane				XXX				XXX				
		1,1-Dichloroethane				XXX				XXX				
		1,1-Dichloroethylene				XXX				XXX				
		1,2-Dichlorobenzene				XXX				XXX				
		1,2-Dichloroethane (Ethylene dichloride)				XXX				XXX				
		1,2-Dichloropropane				XXX				XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
16	Volatiles, Halogenated (continued)	1,3-Dichlorobenzene				XXX				XXX				
		1,4-Dichlorobenzene				XXX				XXX				
		Bromodichloromethane				XXX				XXX				
		Bromoform				XXX				XXX				
		Bromomethane				XXX				XXX				
		Carbon tetrachloride				XXX				XXX				
		Chlorobenzene				XXX				XXX				
		Chloroform			XXX				XXX					
		Chloromethane				XXX				XXX				
		Cis-1,3-Dichloropropylene				XXX				XXX				
		Dibromochloromethane			XXX					XXX				
		Ethylene dibromide				XXX				XXX				
		Methylene chloride				XXX				XXX				
		Tetrachloroethylene (Perchloroethylene)				XXX				XXX				
		Trans-1,2-Dichloroethylene				XXX				XXX				
		Trans-1,3-Dichloropropylene				XXX				XXX				
		Trichloroethylene				XXX				XXX				
		Trichlorofluoromethane				XXX				XXX				
		Vinyl chloride (Chloroethylene)				XXX				XXX				
19	Extractables, Base Neutral	Acenaphthene												
		5-nitro Acenaphthene												
		Acenaphthylene												
		Anthracene												
		Benz(a)anthracene												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
		EFFLUENT STREAM:	Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
19	Extractables, Base Neutral (continued)	Benzo(a)pyrene												
		Benzo(b)fluoranthene												
		Benzo(g,h,i)perylene												
		Benzo(k)fluoranthene												
		Biphenyl												
		Camphene												
		1-Chloronaphthalene												
		2-Chloronaphthalene												
		Chrysene												
		Dibenz(a,h)anthracene												
		Fluoranthene												
		Fluorene												
		Indeno(1,2,3-cd)pyrene												
		Indole												
		1-Methylnaphthalene												
		2-Methylnaphthalene												
		Naphthalene												
		Perylene												
		Phenanthrene												
		Pyrene												
		Benzyl butyl phthalate												
		Bis(2-ethylhexyl) phthalate												
		Di-n-butyl phthalate												
		4-Bromophenyl phenyl ether												
		4-Chlorophenyl phenyl ether												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
19	Extractables, Base Neutral (continued)	Bis(2-chloroisopropyl)ether												
		Bis(2-chloroethyl)ether												
		2,4-Dinitrotoluene												
		2,6-Dinitrotoluene												
		Bis(2-chloroethoxy)methane												
		Diphenylamine												
		Diphenyl Ether												
		N-Nitrosodiphenylamine												
		N-Nitrosodi-n-propylamine												
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene								XXX				
		1,2,3,5-Tetrachlorobenzene								XXX				
		1,2,4,5-Tetrachlorobenzene							XXX					
		1,2,3-Trichlorobenzene								XXX				
		1,2,4-Trichlorobenzene								XXX				
		2,4,5-Trichlorotoluene								XXX				
		Hexachlorobenzene								XXX				
		Hexachlorobutadiene								XXX				
		Hexachlorocyclopentadiene								XXX				
		Hexachloroethane								XXX				
		Octachlorostyrene								XXX				
		Pentachlorobenzene								XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

NAME OF EFFLUENT STREAM:			Water Treatment Plant Neutralization Sump				Radioactive Liquid Waste Management Tanks				Boiler Blowdown			
EFFLUENT STREAM:			Process Effluent				Batch Discharge Effluent				Boiler Blowdown Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 11)	2,3,7,8-Tetrachlorodibenzo-p-dioxin								XXX				
		Octachlorodibenzo-p-dioxin								XXX				
		Octachlorodibenzofuran								XXX				
		Total heptachlorinated dibenzo-p-dioxins								XXX				
		Total heptachlorinated dibenzofurans								XXX				
		Total hexachlorinated dibenzo-p-dioxins								XXX				
		Total hexachlorinated dibenzofurans								XXX				
		Total pentachlorinated dibenzo-p-dioxins								XXX				
		Total pentachlorinated dibenzofurans								XXX				
		Total tetrachlorinated dibenzo-p-dioxins								XXX				
		Total tetrachlorinated dibenzofurans								XXX				
25	Solvent Extractables	Oil and grease			XXX			XXX						XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)							XXX					
E1	Metals	Iron		XXX				XXX				XXX		
E2	Temperature	Temperature												
		Temperature Rise												

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED					
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX		XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)				XXX	
		Total Kjeldahl nitrogen			XXX	XXX	
4b		Nitrate + Nitrite			XXX	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC) (NOTE 8)	XXX		XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX		XXX	XXX	XXX
6	Total phosphorus	Total phosphorus			XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX		XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX		XXX	XXX	XXX
		Volatile suspended solids (VSS)	XXX				
9	Total metals	Aluminum			XXX	XXX	XXX
		Beryllium					
		Boron					
		Cadmium (NOTE 9)					
		Chromium			XXX	XXX	
		Cobalt					XXX
		Copper	XXX		XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED					
9	Total metals (continued)	Lead (NOTE 9)			XXX		
		Lithium					
		Molybdenum			XXX	XXX	XXX
		Nickel			XXX	XXX	
		Silver					
		Strontium					
		Thallium					
		Vanadium			XXX	XXX	
		Zinc	XXX		XXX	XXX	XXX
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			XXX	XXX	
12	Mercury	Mercury					
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX			XXX	XXX
15	Sulphide	Sulphide					
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane					
		1,1,2-Trichloroethane					
		1,1-Dichloroethane					
		1,1-Dichloroethylene					
		1,2-Dichlorobenzene					
		1,2-Dichloroethane (Ethylene dichloride)					
		1,2-Dichloropropane					

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**					
16	Volatiles, Halogenated (continued)	1,3-Dichlorobenzene					
		1,4-Dichlorobenzene					
		Bromodichloromethane					
		Bromoform					
		Bromomethane					
		Carbon tetrachloride					
		Chlorobenzene					
		Chloroform					
		Chloromethane					
		Cis-1,3-Dichloropropylene					
		Dibromochloromethane					
		Ethylene dibromide					
		Methylene chloride					
		Tetrachloroethylene (Perchloroethylene)					
		Trans-1,2-Dichloroethylene					
		Trans-1,3-Dichloropropylene					
		Trichloroethylene					
		Trichlorofluoromethane					
		Vinyl chloride (Chloroethylene)					
19	Extractables, Base Neutral	Acenaphthene					
		5-nitro Acenaphthene					
		Acenaphthylene					
		Anthracene					
		Benz(a)anthracene					

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED					
19	Extractables, Base Neutral (continued)	Benzo(a)pyrene					
		Benzo(b)fluoranthene					
		Benzo(g,h,i)perylene					
		Benzo(k)fluoranthene					
		Biphenyl					
		Camphene					
		1-Chloronaphthalene					
		2-Chloronaphthalene					
		Chrysene					
		Dibenz(a,h)anthracene					
		Fluoranthene					
		Fluorene					
		Indeno(1,2,3-cd)pyrene					
		Indole					
		1-Methylnaphthalene					
		2-Methylnaphthalene					
		Naphthalene					
		Perylene					
		Phenanthrene					
		Pyrene					
		Benzyl butyl phthalate					
		Bis(2-ethylhexyl) phthalate					
		Di-n-butyl phthalate					
		4-Bromophenyl phenyl ether					
		4-Chlorophenyl phenyl ether					

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED					
19	Extractables, Base Neutral (continued)	Bis(2-chloroisopropyl)ether					
		Bis(2-chloroethyl)ether					
		2,4-Dinitrotoluene					
		2,6-Dinitrotoluene					
		Bis(2-chloroethoxy)methane					
		Diphenylamine					
		Diphenyl Ether					
		N-Nitrosodiphenylamine					
		N-Nitrosodi-n-propylamine					
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene					
		1,2,3,5-Tetrachlorobenzene					
		1,2,4,5-Tetrachlorobenzene					
		1,2,3-Trichlorobenzene				XXX	
		1,2,4-Trichlorobenzene					
		2,4,5-Trichlorotoluene					
		Hexachlorobenzene					
		Hexachlorobutadiene					
		Hexachlorocyclopentadiene					
		Hexachloroethane					
		Octachlorostyrene					
		Pentachlorobenzene					

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	Oily Water Separator	-		-	-
		EFFLUENT STREAM:	Event Discharge Effluent	Once Through Cooling Water		Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly (NOTE 13)	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	during discharge	D	M	during discharge	monthly
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**					
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 11)	2,3,7,8-Tetrachlorodibenzo-p-dioxin					
		Octachlorodibenzo-p-dioxin					
		Octachlorodibenzofuran					
		Total heptachlorinated dibenzo-p-dioxins					
		Total heptachlorinated dibenzofurans					
		Total hexachlorinated dibenzo-p-dioxins					
		Total hexachlorinated dibenzofurans					
		Total pentachlorinated dibenzo-p-dioxins					
		Total pentachlorinated dibenzofurans					
		Total tetrachlorinated dibenzo-p-dioxins					
		Total tetrachlorinated dibenzofurans					
25	Solvent Extractables	Oil and grease	XXX		XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)					XXX
E1	Metals	Iron	XXX		XXX	XXX	XXX
E2	Temperature	Temperature		XXX			
		Temperature Rise		XXX			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC) (NOTE 8)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum	XXX	
		Beryllium		
		Boron		
		Cadmium (NOTE 9)	XXX	
		Chromium	XXX	
		Cobalt	XXX	
		Copper	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
9	Total metals (continued)	Lead (NOTE 9)		
		Lithium		
		Molybdenum	XXX	
		Nickel	XXX	
		Silver		
		Strontium		
		Thallium		
		Vanadium		
		Zinc	XXX	XXX
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)	XXX	
12	Mercury	Mercury	XXX	
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	
15	Sulphide	Sulphide		
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		
		1,1,2-Trichloroethane		
		1,1-Dichloroethane		
		1,1-Dichloroethylene		
		1,2-Dichlorobenzene		
		1,2-Dichloroethane (Ethylene dichloride)		
		1,2-Dichloropropane		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
16	Volatiles, Halogenated (continued)	1,3-Dichlorobenzene		
		1,4-Dichlorobenzene		
		Bromodichloromethane		
		Bromoform		
		Bromomethane		
		Carbon tetrachloride		
		Chlorobenzene		
		Chloroform		
		Chloromethane		
		Cis-1,3-Dichloropropylene		
		Dibromochloromethane		
		Ethylene dibromide		
		Methylene chloride		
		Tetrachloroethylene (Perchloroethylene)		
		Trans-1,2-Dichloroethylene		
		Trans-1,3-Dichloropropylene		
		Trichloroethylene		
		Trichlorofluoromethane		
		Vinyl chloride (Chloroethylene)		
19	Extractables, Base Neutral	Acenaphthene		
		5-nitro Acenaphthene		
		Acenaphthylene		
		Anthracene		
		Benz(a)anthracene		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
19	Extractables, Base Neutral (continued)	Benzo(a)pyrene		
		Benzo(b)fluoranthene		
		Benzo(g,h,i)perylene		
		Benzo(k)fluoranthene		
		Biphenyl		
		Camphene		
		1-Chloronaphthalene		
		2-Chloronaphthalene		
		Chrysene		
		Dibenz(a,h)anthracene		
		Fluoranthene		
		Fluorene		
		Indeno(1,2,3-cd)pyrene		
		Indole		
		1-Methylnaphthalene		
		2-Methylnaphthalene		
		Naphthalene		
		Perylene		
		Phenanthrene		
		Pyrene		
		Benzyl butyl phthalate		
		Bis(2-ethylhexyl) phthalate		
		Di-n-butyl phthalate		
		4-Bromophenyl phenyl ether		
		4-Chlorophenyl phenyl ether		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
19	Extractables, Base Neutral (continued)	Bis(2-chloroisopropyl)ether		
		Bis(2-chloroethyl)ether		
		2,4-Dinitrotoluene		
		2,6-Dinitrotoluene		
		Bis(2-chloroethoxy)methane		
		Diphenylamine		
		Diphenyl Ether		
		N-Nitrosodiphenylamine		
		N-Nitrosodi-n-propylamine		
23	Extractables, Neutral -Chlorinated	1,2,3,4-Tetrachlorobenzene		
		1,2,3,5-Tetrachlorobenzene		
		1,2,4,5-Tetrachlorobenzene		
		1,2,3-Trichlorobenzene		
		1,2,4-Trichlorobenzene		
		2,4,5-Trichlorotoluene		
		Hexachlorobenzene		
		Hexachlorobutadiene		
		Hexachlorocyclopentadiene		
		Hexachloroethane		
		Octachlorostyrene		
		Pentachlorobenzene		

SCHEDULE C - NUCLEAR POWERED THERMAL GENERATING STATIONS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans (NOTE 11)	2,3,7,8-Tetrachlorodibenzo-p-dioxin		
		Octachlorodibenzo-p-dioxin		
		Octachlorodibenzofuran		
		Total heptachlorinated dibenzo-p-dioxins		
		Total heptachlorinated dibenzofurans		
		Total hexachlorinated dibenzo-p-dioxins		
		Total hexachlorinated dibenzofurans		
		Total pentachlorinated dibenzo-p-dioxins		
		Total pentachlorinated dibenzofurans		
		Total tetrachlorinated dibenzo-p-dioxins		
		Total tetrachlorinated dibenzofurans		
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)		
E1	Metals	Iron	XXX	XXX
E2	Temperature	Temperature		
		Temperature Rise		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE D - BRUCE HEAVY WATER PLANTS

		NAME OF EFFLUENT STREAM:	-				Effluent Lagoon	-		Drain Lagoon	Carbonated Equipment Drain
		EFFLUENT STREAM:	Process Effluent				Event Discharge Effluent	Once Through Cooling Water		Storm Water	Equipment Cleaning Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	D	TW	W	M	during discharge	D	M	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED									
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX		XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium				XXX				XXX	
		Total Kjeldahl nitrogen				XXX				XXX	
4b		Nitrate + Nitrite				XXX			XXX	XXX	
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX			XXX		XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)				XXX	XXX		XXX	XXX	XXX
6	Total phosphorus	Total phosphorus							XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX				XXX		XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)				XXX	XXX		XXX	XXX	XXX
		Volatile suspended solids (VSS)									
9	Total metals	Aluminum			XXX		XXX		XXX	XXX	
		Beryllium				XXX					
		Boron				XXX					
		Cadmium				XXX					
		Chromium				XXX					
		Cobalt				XXX	XXX		XXX		
		Copper				XXX			XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE D - BRUCE HEAVY WATER PLANTS

		NAME OF EFFLUENT STREAM:	-				Effluent Lagoon	-		Drain Lagoon	Carbonated Equipment Drain
		EFFLUENT STREAM:	Process Effluent				Event Discharge Effluent	Once Through Cooling Water		Storm Water	Equipment Cleaning Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None	Quarterly		None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly	None		None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly	None		None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly	None		None	None
		FREQUENCY OF SAMPLING:	D	TW	W	M	during discharge	D	M	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED									
9	Total metals (continued)	Lead				XXX					
		Lithium				XXX					
		Molybdenum				XXX	XXX		XXX		
		Nickel				XXX					
		Silver				XXX					
		Strontium				XXX					
		Thallium				XXX					
		Vanadium				XXX			XXX		
		Zinc				XXX			XXX	XXX	XXX
12	Mercury	Mercury					XXX				
14	Phenolics (4AAP)	Phenolics (4AAP)				XXX			XXX		
15	Sulphide	Sulphide	XXX				XXX				XXX
25	Solvent Extractables	Oil and grease		XXX			XXX		XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)				XXX	XXX		XXX	XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

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SCHEDULE D - BRUCE HEAVY WATER PLANTS

NAME OF EFFLUENT STREAM:			-				Effluent Lagoon	-		Drain Lagoon	Carbonated Equipment Drain
EFFLUENT STREAM:			Process Effluent				Event Discharge Effluent	Once Through Cooling Water		Storm Water	Equipment Cleaning Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				None	Quarterly		None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly	None		None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly	None		None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly	None		None	None
FREQUENCY OF SAMPLING:			D	TW	W	M	during discharge	D	M	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**									
E1	Metals	Iron				XXX				XXX	XXX
E2	Temperature	Temperature						XXX			
		Temperature Rise						XXX			
E4	Diethanolamine	Diethanolamine					XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE D - BRUCE HEAVY WATER PLANTS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX
		Total Kjeldahl nitrogen		XXX
4b		Nitrate + Nitrite		XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum		
		Beryllium		
		Boron		
		Cadmium		
		Chromium		
		Cobalt		
		Copper	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE D - BRUCE HEAVY WATER PLANTS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
9	Total metals (continued)	Lead		
		Lithium		
		Molybdenum		
		Nickel		
		Silver		
		Strontium		
		Thallium		
		Vanadium		
		Zinc	XXX	XXX
12	Mercury	Mercury		
14	Phenolics (4AAP)	Phenolics (4AAP)		
15	Sulphide	Sulphide		XXX
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE D - BRUCE HEAVY WATER PLANTS

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
E1	Metals	Iron	XXX	XXX
E2	Temperature	Temperature		
		Temperature Rise		
E4	Diethanolamine	Diethanolamine		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

NAME OF EFFLUENT STREAM:			Sewage Treatment Plant				Condensate Plant Water Treatment Plant				Steam Transformer Plant "O"			
EFFLUENT STREAM:			Process Effluent				Process Effluent				Combined Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				None (NOTE 10)				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX				XXX			
4a	Nitrogen	Ammonia plus Ammonium		XXX						XXX			XXX	
		Total Kjeldahl nitrogen		XXX					XXX				XXX	
4b		Nitrate + Nitrite		XXX					XXX					XXX
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX				XXX				XXX		
5b		Total organic carbon (TOC) (NOTE 1)		XXX				XXX				XXX		
6	Total phosphorus	Total phosphorus		XXX						XXX				XXX
7	Specific conductance	Specific conductance	XXX				XXX				XXX			
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX					XXX				XXX		
		Volatile suspended solids (VSS)		XXX										
9	Total metals	Aluminum			XXX				XXX					XXX
		Beryllium				XXX				XXX				XXX
		Boron				XXX				XXX				XXX
		Cadmium				XXX				XXX				XXX
		Chromium			XXX					XXX				XXX
		Cobalt			XXX				XXX					XXX
		Copper		XXX				XXX				XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Condensate Plant Water Treatment Plant				Steam Transformer Plant "O"			
		EFFLUENT STREAM:	Process Effluent				Process Effluent				Combined Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None (NOTE 10)				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
9	Total metals (continued)	Lead				XXX				XXX				XXX
		Lithium				XXX				XXX				XXX
		Molybdenum			XXX					XXX				XXX
		Nickel			XXX					XXX				XXX
		Silver				XXX				XXX				XXX
		Strontium				XXX				XXX				XXX
		Thallium				XXX				XXX				XXX
		Vanadium			XXX					XXX				XXX
		Zinc		XXX				XXX				XXX		
10	Hydrides	Antimony												
		Arsenic												
		Selenium												
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			XXX					XXX				XXX
12	Mercury	Mercury			XXX									
14	Phenolics (4AAP)	Phenolics (4AAP)											XXX	
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				XXX				XXX				
		1,1,2-Trichloroethane				XXX				XXX				
		1,1-Dichloroethane				XXX				XXX				
		1,1-Dichloroethylene				XXX				XXX				
		1,2-Dichlorobenzene				XXX				XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

NAME OF EFFLUENT STREAM:			Sewage Treatment Plant				Condensate Plant Water Treatment Plant				Steam Transforme Plant "O"			
EFFLUENT STREAM:			Process Effluent				Process Effluent				Combined Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				None (NOTE 10)				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**												
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)				XXX				XXX				
		1,2-Dichloropropane				XXX				XXX				
		1,3-Dichlorobenzene				XXX				XXX				
		1,4-Dichlorobenzene				XXX				XXX				
		Bromodichloromethane				XXX				XXX				
		Bromoform				XXX				XXX				
		Bromomethane				XXX				XXX				
		Carbon tetrachloride				XXX				XXX				
		Chlorobenzene				XXX				XXX				
		Chloroform			XXX					XXX				
		Chloromethane				XXX				XXX				
		Cis-1,3-Dichloropropylene				XXX				XXX				
		Dibromochloromethane				XXX				XXX				
		Ethylene dibromide				XXX				XXX				
		Methylene chloride				XXX				XXX				
		Tetrachloroethylene (Perchloroethylene)				XXX				XXX				
		Trans-1,2-Dichloroethylene				XXX				XXX				
		Trans-1,3-Dichloropropylene				XXX				XXX				
		Trichloroethylene				XXX				XXX				
		Trichlorofluoromethane				XXX			XXX					
		Vinyl chloride (Chloroethylene)				XXX				XXX				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Condensate Plant Water Treatment Plant				Steam Transformer Plant "O"			
		EFFLUENT STREAM:	Process Effluent				Process Effluent				Combined Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None (NOTE 10)				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**												
17	Volatiles, Non-Halogenated	Benzene								XXX				
		Ethylbenzene								XXX				
		Styrene								XXX				
		Toluene							XXX					
		o-Xylene								XXX				
		m-Xylene and p-Xylene								XXX				
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin								XXX				
		Octachlorodibenzo-p-dioxin								XXX				
		Octachlorodibenzofuran								XXX				
		Total heptachlorinated dibenzo-p-dioxins								XXX				
		Total heptachlorinated dibenzofurans								XXX				
		Total hexachlorinated dibenzo-p-dioxins								XXX				
		Total hexachlorinated dibenzofurans								XXX				
		Total pentachlorinated dibenzo-p-dioxins								XXX				
		Total pentachlorinated dibenzofurans								XXX				
		Total tetrachlorinated dibenzo-p-dioxins								XXX				
		Total tetrachlorinated dibenzofurans								XXX				
25	Solvent Extractables	Oil and grease				XXX			XXX				XXX	
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)												XXX
E1	Metals	Iron		XXX				XXX				XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	Steam Transformer Plant "A"				Bruce Nuclear Waste Storage Site	Douglas Point Outfall	-
		EFFLUENT STREAM:	Combined Effluent				Waste Disposal Site Effluent	Once Through Cooling Water	Equipment Cleaning Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None	Quarterly	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				None	None	None
		FREQUENCY OF SAMPLING:	D	TW	W	M	during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED							
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium			XXX		XXX		XXX
		Total Kjeldahl nitrogen			XXX		XXX		
4b		Nitrate + Nitrite				XXX	XXX		
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX			XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)		XXX			XXX	XXX	XXX
6	Total phosphorus	Total phosphorus				XXX	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX				XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)		XXX			XXX	XXX	XXX
		Volatile suspended solids (VSS)							
9	Total metals	Aluminum				XXX		XXX	
		Beryllium				XXX		XXX	
		Boron				XXX		XXX	
		Cadmium				XXX		XXX	
		Chromium				XXX		XXX	
		Cobalt				XXX		XXX	
		Copper		XXX			XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	Steam Transformer Plant "A"				Bruce Nuclear Waste Storage Site	Douglas Point Outfall	-
		EFFLUENT STREAM:	Combined Effluent				Waste Disposal Site Effluent	Once Through Cooling Water	Equipment Cleaning Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None	Quarterly	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				None	None	None
		FREQUENCY OF SAMPLING:	D	TW	W	M	during discharge	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**							
9	Total metals (continued)	Lead				XXX		XXX	
		Lithium				XXX		XXX	
		Molybdenum				XXX		XXX	
		Nickel				XXX		XXX	
		Silver				XXX		XXX	
		Strontium				XXX		XXX	
		Thallium				XXX		XXX	
		Vanadium				XXX		XXX	XXX
		Zinc		XXX			XXX	XXX	XXX
10	Hydrides	Antimony							
		Arsenic							
		Selenium							
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)				XXX		XXX	
12	Mercury	Mercury							
14	Phenolics (4AAP)	Phenolics (4AAP)			XXX		XXX	XXX	
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane							
		1,1,2-Trichloroethane							
		1,1-Dichloroethane							
		1,1-Dichloroethylene							
		1,2-Dichlorobenzene							

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

NAME OF EFFLUENT STREAM:			Steam Transformer Plant "A"				Bruce Nuclear Waste Storage Site	Douglas Point Outfall	-
EFFLUENT STREAM:			Combined Effluent				Waste Disposal Site Effluent	Once Through Cooling Water	Equipment Cleaning Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				None	Quarterly	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				None	None	None
FREQUENCY OF SAMPLING:			D	TW	W	M	during discharge	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**							
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)							
		1,2-Dichloropropane							
		1,3-Dichlorobenzene							
		1,4-Dichlorobenzene							
		Bromodichloromethane							
		Bromoform							
		Bromomethane							
		Carbon tetrachloride							
		Chlorobenzene							
		Chloroform							
		Chloromethane							
		Cis-1,3-Dichloropropylene							
		Dibromochloromethane							
		Ethylene dibromide							
		Methylene chloride							
		Tetrachloroethylene (Perchloroethylene)							
		Trans-1,2-Dichloroethylene							
		Trans-1,3-Dichloropropylene							
		Trichloroethylene							
		Trichlorofluoromethane							
		Vinyl chloride (Chloroethylene)							

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	Steam Transformer Plant "A"				Bruce Nuclear Waste Storage Site	Douglas Point Outfall	-
		EFFLUENT STREAM:	Combined Effluent				Waste Disposal Site Effluent	Once Through Cooling Water	Equipment Cleaning Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				None	Quarterly	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				None	None	None
		FREQUENCY OF SAMPLING:	D	TW	W	M	during discharge	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED							
17	Volatiles, Non-Halogenated	Benzene							
		Ethylbenzene							
		Styrene							
		Toluene							
		o-Xylene							
		m-Xylene and p-Xylene							
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin							
		Octachlorodibenzo-p-dioxin							
		Octachlorodibenzofuran							
		Total heptachlorinated dibenzo-p-dioxins							
		Total heptachlorinated dibenzofurans							
		Total hexachlorinated dibenzo-p-dioxins							
		Total hexachlorinated dibenzofurans							
		Total pentachlorinated dibenzo-p-dioxins							
		Total pentachlorinated dibenzofurans							
		Total tetrachlorinated dibenzo-p-dioxins							
		Total tetrachlorinated dibenzofurans							
25	Solvent Extractables	Oil and grease			XXX		XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)				XXX		XXX	
E1	Metals	Iron		XXX			XXX	XXX	XXX

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum	XXX	
		Beryllium	XXX	
		Boron		
		Cadmium		
		Chromium	XXX	
		Cobalt	XXX	
		Copper	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
9	Total metals (continued)	Lead		
		Lithium		
		Molybdenum	XXX	
		Nickel	XXX	
		Silver		
		Strontium		
		Thallium		
		Vanadium	XXX	
		Zinc	XXX	XXX
10	Hydrides	Antimony		
		Arsenic		
		Selenium		
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)		
12	Mercury	Mercury		
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		
		1,1,2-Trichloroethane		
		1,1-Dichloroethane		
		1,1-Dichloroethylene		
		1,2-Dichlorobenzene		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)		
		1,2-Dichloropropane		
		1,3-Dichlorobenzene		
		1,4-Dichlorobenzene		
		Bromodichloromethane		
		Bromoform		
		Bromomethane		
		Carbon tetrachloride		
		Chlorobenzene		
		Chloroform		
		Chloromethane		
		Cis-1,3-Dichloropropylene		
		Dibromochloromethane		
		Ethylene dibromide		
		Methylene chloride		
		Tetrachloroethylene (Perchloroethylene)		
		Trans-1,2-Dichloroethylene		
		Trans-1,3-Dichloropropylene		
		Trichloroethylene		
		Trichlorofluoromethane		
		Vinyl chloride (Chloroethylene)		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE E - BRUCE NUCLEAR POWER DEVELOPMENT SERVICES

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
17	Volatiles, Non-Halogenated	Benzene		
		Ethylbenzene		
		Styrene		
		Toluene		
		o-Xylene		
		m-Xylene and p-Xylene		
24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans	2,3,7,8-Tetrachlorodibenzo-p-dioxin		
		Octachlorodibenzo-p-dioxin		
		Octachlorodibenzofuran		
		Total heptachlorinated dibenzo-p-dioxins		
		Total heptachlorinated dibenzofurans		
		Total hexachlorinated dibenzo-p-dioxins		
		Total hexachlorinated dibenzofurans		
		Total pentachlorinated dibenzo-p-dioxins		
		Total pentachlorinated dibenzofurans		
		Total tetrachlorinated dibenzo-p-dioxins		
		Total tetrachlorinated dibenzofurans		
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)	XXX	
E1	Metals	Iron	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Boiler Blowdown				Water Treatment Plant			
		EFFLUENT STREAM:	Process Effluent				Boiler Blowdown Effluent				Process Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX				XXX			
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)		XXX				XXX						XXX
		Total Kjeldahl nitrogen		XXX					XXX				XXX	
4b		Nitrate + Nitrite		XXX					XXX				XXX	
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX				XXX				XXX		
5b		Total organic carbon (TOC) (NOTE 1)		XXX				XXX				XXX		
6	Total phosphorus	Total phosphorus		XXX				XXX					XXX	
7	Specific conductance	Specific conductance	XXX				XXX				XXX			
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX					XXX					XXX	
		Volatile suspended solids (VSS)		XXX										
9	Total metals	Aluminum			XXX				XXX				XXX	
		Beryllium				XXX				XXX				XXX
		Boron				XXX				XXX				XXX
		Cadmium				XXX				XXX				XXX
		Chromium			XXX				XXX					XXX
		Cobalt			XXX				XXX					XXX
		Copper		XXX				XXX				XXX		
		Lead				XXX		XXX						XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Boiler Blowdown				Water Treatment Plant			
		EFFLUENT STREAM:	Process Effluent				Boiler Blowdown Effluent				Process Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
9	Total metals (continued)	Lithium				XXX				XXX				XXX
		Molybdenum			XXX				XXX					XXX
		Nickel			XXX					XXX				XXX
		Silver				XXX				XXX				XXX
		Strontium				XXX				XXX				XXX
		Thallium				XXX				XXX				XXX
		Vanadium				XXX				XXX				XXX
		Zinc		XXX				XXX				XXX		
10	Hydrides	Antimony				XXX				XXX				
		Arsenic				XXX			XXX					
		Selenium				XXX				XXX				
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)			XXX				XXX					XXX
12	Mercury	Mercury			XXX				XXX				XXX	
14	Phenolics (4AAP)	Phenolics (4AAP)		XXX					XXX					XXX
15	Sulphide	Sulphide												
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				XXX								XXX
		1,1,2-Trichloroethane				XXX								XXX
		1,1-Dichloroethane				XXX								XXX
		1,1-Dichloroethylene				XXX								XXX
		1,2-Dichlorobenzene				XXX								XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR 6/13/89

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Boiler Blowdown				Water Treatment Plant			
		EFFLUENT STREAM:	Process Effluent				Boiler Blowdown Effluent				Process Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)				XXX								XXX
		1,2-Dichloropropane				XXX								XXX
		1,3-Dichlorobenzene				XXX								XXX
		1,4-Dichlorobenzene				XXX								XXX
		Bromodichloromethane				XXX								XXX
		Bromoform				XXX								XXX
		Bromomethane				XXX								XXX
		Carbon tetrachloride				XXX								XXX
		Chlorobenzene				XXX								XXX
		Chloroform		XXX									XXX	
		Chloromethane				XXX								XXX
		Cis-1,3-Dichloropropylene				XXX								XXX
		Dibromochloromethane			XXX								XXX	
		Ethylene dibromide				XXX								XXX
		Methylene chloride				XXX								XXX
		Tetrachloroethylene (Perchloroethylene)				XXX								XXX
		Trans-1,2-Dichloroethylene				XXX								XXX
		Trans-1,3-Dichloropropylene				XXX								XXX
		Trichloroethylene				XXX								XXX
		Trichlorofluoromethane				XXX								XXX
		Vinyl chloride (Chloroethylene)				XXX								XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Sewage Treatment Plant				Boiler Blowdown				Water Treatment Plant			
		EFFLUENT STREAM:	Process Effluent				Boiler Blowdown Effluent				Process Effluent			
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly			
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly			
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly			
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly			
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
17	Volatiles, Non-Halogenated	Benzene				XXX								
		Ethylbenzene				XXX								
		Styrene				XXX								
		Toluene			XXX									
		o-Xylene				XXX								
		m-Xylene and p-Xylene				XXX								
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol				XXX								
		2,3,4,6-Tetrachlorophenol				XXX								
		2,3,5,6-Tetrachlorophenol				XXX								
		2,3,4-Trichlorophenol				XXX								
		2,3,5-Trichlorophenol				XXX								
		2,4,5-Trichlorophenol				XXX								
		2,4,6-Trichlorophenol				XXX								
		2,4 Dimethyl phenol				XXX								
		2,4-Dinitrophenol				XXX								
		2,4-Dichlorophenol				XXX								
		2,6-Dichlorophenol				XXX								
		4,6-Dinitro-o-cresol				XXX								
		2-Chlorophenol				XXX								
		4-Chloro-3-methylphenol				XXX								
		4-Nitrophenol				XXX								

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

NAME OF EFFLUENT STREAM:			Sewage Treatment Plant				Boiler Blowdown				Water Treatment Plant			
EFFLUENT STREAM:			Process Effluent				Boiler Blowdown Effluent				Process Effluent			
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly			
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly			
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly			
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly			
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED												
20	Extractables, Acid (Phenolics) (continued)	m-Cresol				XXX								
		o-Cresol				XXX								
		p-Cresol				XXX								
		Pentachlorophenol				XXX								
		Phenol			XXX									
25	Solvent Extractables	Oil and grease		XXX					XXX				XXX	
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)			XXX									
E1	Metals	Iron		XXX				XXX				XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Tank 2	Tank 4	Site Lagoons	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge	during discharge	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED				
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)				XXX
		Total Kjeldahl nitrogen	XXX		XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX	XXX	XXX
		Volatile suspended solids (VSS)				
9	Total metals	Aluminum	XXX	XXX	XXX	XXX
		Beryllium				
		Boron	XXX	XXX	XXX	
		Cadmium			XXX	
		Chromium	XXX	XXX	XXX	XXX
		Cobalt	XXX		XXX	XXX
		Copper	XXX	XXX	XXX	XXX
		Lead		XXX		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Tank 2	Tank 4	Site Lagoons	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge	during discharge	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED				
9	Total metals (continued)	Lithium				
		Molybdenum	XXX		XXX	XXX
		Nickel	XXX	XXX	XXX	
		Silver				
		Strontium				
		Thallium				
		Vanadium	XXX			
		Zinc	XXX	XXX	XXX	XXX
10	Hydrides	Antimony	XXX	XXX		
		Arsenic	XXX	XXX		
		Selenium				
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)	XXX	XXX	XXX	XXX
12	Mercury	Mercury		XXX		
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	XXX		XXX
15	Sulphide	Sulphide				XXX
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				
		1,1,2-Trichloroethane				
		1,1-Dichloroethane				
		1,1-Dichloroethylene				
		1,2-Dichlorobenzene				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Tank 2	Tank 4	Site Lagoons	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge	during discharge	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED				
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)				
		1,2-Dichloropropane				
		1,3-Dichlorobenzene				
		1,4-Dichlorobenzene				
		Bromodichloromethane				
		Bromoform				
		Bromomethane				
		Carbon tetrachloride				
		Chlorobenzene				
		Chloroform	XXX	XXX		
		Chloromethane				
		Cis-1,3-Dichloropropylene				
		Dibromochloromethane				
		Ethylene dibromide				
		Methylene chloride				
		Tetrachloroethylene (Perchloroethylene)				
		Trans-1,2-Dichloroethylene				
		Trans-1,3-Dichloropropylene				
		Trichloroethylene				
		Trichlorofluoromethane				
		Vinyl chloride (Chloroethylene)				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

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SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Tank 2	Tank 4	Site Lagoons	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge	during discharge	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED				
17	Volatiles, Non-Halogenated	Benzene				
		Ethylbenzene				
		Styrene				
		Toluene				
		o-Xylene				
		m-Xylene and p-Xylene				
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol				
		2,3,4,6-Tetrachlorophenol				
		2,3,5,6-Tetrachlorophenol				
		2,3,4-Trichlorophenol				
		2,3,5-Trichlorophenol				
		2,4,5-Trichlorophenol				
		2,4,6-Trichlorophenol				
		2,4-Dimethyl phenol				
		2,4-Dinitrophenol				
		2,4-Dichlorophenol				
		2,6-Dichlorophenol				
		4,6-Dinitro-o-cresol				
		2-Chlorophenol				
		4-Chloro-3-methylphenol				
		4-Nitrophenol				

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	Tank 2	Tank 4	Site Lagoons	-
		EFFLUENT STREAM:	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Equipment Cleaning Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge	during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**				
20	Extractables, Acid (Phenolics) (continued)	m-Cresol				
		o-Cresol				
		p-Cresol				
		Pentachlorophenol				
		Phenol	XXX	XXX	XXX	
25	Solvent Extractables	Oil and grease	XXX	XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)				
E1	Metals	Iron	XXX	XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium (NOTE 7)	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum	XXX	
		Beryllium		
		Boron		
		Cadmium		
		Chromium	XXX	
		Cobalt	XXX	
		Copper	XXX	XXX
		Lead		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
9	Total metals (continued)	Lithium		
		Molybdenum	XXX	
		Nickel	XXX	
		Silver		
		Strontium		
		Thallium		
		Vanadium		
		Zinc	XXX	XXX
10	Hydrides	Antimony		
		Arsenic		
		Selenium		
11	Chromium (Hexavalent)	Chromium (Hexavalent) (NOTE 2)	XXX	
12	Mercury	Mercury		
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	
15	Sulphide	Sulphide		
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		
		1,1,2-Trichloroethane		
		1,1-Dichloroethane		
		1,1-Dichloroethylene		
		1,2-Dichlorobenzene		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
16	Volatiles, Halogenated (continued)	1,2-Dichloroethane (Ethylene dichloride)		
		1,2-Dichloropropane		
		1,3-Dichlorobenzene		
		1,4-Dichlorobenzene		
		Bromodichloromethane		
		Bromoform		
		Bromomethane		
		Carbon tetrachloride		
		Chlorobenzene		
		Chloroform		
		Chloromethane		
		Cis-1,3-Dichloropropylene		
		Dibromochloromethane		
		Ethylene dibromide		
		Methylene chloride		
		Tetrachloroethylene (Perchloroethylene)		
		Trans-1,2-Dichloroethylene		
		Trans-1,3-Dichloropropylene		
		Trichloroethylene		
		Trichlorofluoromethane		
		Vinyl chloride (Chloroethylene)		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
17	Volatiles, Non-Halogenated	Benzene		
		Ethylbenzene		
		Styrene		
		Toluene		
		o-Xylene		
		m-Xylene and p-Xylene		
20	Extractables, Acid (Phenolics)	2,3,4,5-Tetrachlorophenol		
		2,3,4,6-Tetrachlorophenol		
		2,3,5,6-Tetrachlorophenol		
		2,3,4-Trichlorophenol		
		2,3,5-Trichlorophenol		
		2,4,5-Trichlorophenol		
		2,4,6-Trichlorophenol		
		2,4-Dimethyl phenol		
		2,4-Dinitrophenol		
		2,4-Dichlorophenol		
		2,6-Dichlorophenol		
		4,6-Dinitro-o-cresol		
		2-Chlorophenol		
		4-Chloro-3-methylphenol		
		4-Nitrophenol		

SCHEDULE F - DARLINGTON NUCLEAR GENERATING STATION (under construction)

		NAME OF EFFLUENT STREAM:	-	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
20	Extractables, Acid (Phenolics) (continued)	m-Cresol		
		o-Cresol		
		p-Cresol		
		Pentachlorophenol		
		Phenol		
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	PCBs (Total)		
E1	Metals	Iron	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

NAME OF EFFLUENT STREAM:			Sanitary Sewer				Powerhouse Drain				Waste Treatment Centre				"Process" Sewer	
EFFLUENT STREAM:			Process Effluent				Combined Effluent				Batch Discharge Effluent				Once Through Cooling Water	
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly				Quarterly	
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly				None	
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly				None	
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly				None	
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M	D	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**														
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX				XXX				XXX					XXX
4a	Nitrogen	Ammonia plus Ammonium			XXX					XXX		XXX				
		Total Kjeldahl nitrogen		XXX						XXX				XXX		
4b		Nitrate + Nitrite			XXX				XXX					XXX		XXX
5a	Organic carbon	Dissolved organic carbon (DOC)		XXX				XXX				XXX				XXX
5b		Total organic carbon (TOC) (NOTE 1)		XXX				XXX				XXX				XXX
6	Total phosphorus	Total phosphorus		XXX					XXX				XXX			XXX
7	Specific conductance	Specific conductance	XXX				XXX				XXX					XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX					XXX					XXX			XXX
		Volatile suspended solids (VSS)		XXX												
9	Total metals	Aluminum			XXX				XXX				XXX			XXX
		Beryllium				XXX				XXX				XXX		
		Boron				XXX				XXX				XXX		
		Cadmium				XXX				XXX				XXX		
		Chromium				XXX				XXX				XXX		
		Cobalt				XXX				XXX				XXX		
		Copper		XXX				XXX				XXX				XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

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SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

NAME OF EFFLUENT STREAM:			Sanitary Sewer				Powerhouse Drain				Waste Treatment Centre				"Process" Sewer	
EFFLUENT STREAM:			Process Effluent				Combined Effluent				Batch Discharge Effluent				Once Through Cooling Water	
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly				Quarterly	
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly				None	
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly				None	
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly				None	
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M	D	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**														
9	Total metals (continued)	Lead			XXX					XXX				XXX		
		Lithium				XXX				XXX				XXX		
		Molybdenum				XXX				XXX				XXX		
		Nickel			XXX					XXX				XXX		
		Silver				XXX				XXX				XXX		
		Strontium				XXX				XXX				XXX		
		Thallium				XXX				XXX				XXX		
		Vanadium				XXX				XXX				XXX		
		Zinc		XXX				XXX				XXX				XXX
10	Hydrides	Antimony														
		Arsenic														
		Selenium														
11	Chromium (Hexavalent)	Chromium (Hexavalent)				XXX				XXX				XXX		
12	Mercury	Mercury				XXX								XXX		
14	Phenolics (4AAP)	Phenolics (4AAP)		XXX					XXX					XXX		XXX
15	Sulphide	Sulphide														
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane				XXX										
		1,1,2-Trichloroethane				XXX										
		1,1-Dichloroethane				XXX										

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

NAME OF EFFLUENT STREAM:			Sanitary Sewer				Powerhouse Drain				Waste Treatment Centre				"Process" Sewer	
EFFLUENT STREAM:			Process Effluent				Combined Effluent				Batch Discharge Effluent				Once Through Cooling Water	
TOXICITY TESTS SAMPLING FREQUENCY:			Monthly				Monthly				Monthly				Quarterly	
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			Quarterly				Quarterly				Quarterly				None	
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			Quarterly				Quarterly				Quarterly				None	
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			Quarterly				Quarterly				Quarterly				None	
FREQUENCY OF SAMPLING:			D	TW	W	M	D	TW	W	M	D	TW	W	M	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED														
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene				XXX										
		1,2-Dichlorobenzene				XXX										
		1,2-Dichloroethane (Ethylene dichloride)				XXX										
		1,2-Dichloropropane				XXX										
		1,3-Dichlorobenzene				XXX										
		1,4-Dichlorobenzene				XXX										
		Bromodichloromethane				XXX										
		Bromoform				XXX										
		Bromomethane				XXX										
		Carbon tetrachloride				XXX										
		Chlorobenzene				XXX										
		Chloroform		XXX												
		Chloromethane				XXX										
		Cis-1,3-Dichloropropylene				XXX										
		Dibromochloromethane				XXX										
		Ethylene dibromide				XXX										
		Methylene chloride				XXX										
		Tetrachloroethylene (Perchloroethylene)				XXX										
		Trans-1,2-Dichloroethylene				XXX										
		Trans-1,3-Dichloropropylene				XXX										
		Trichloroethylene				XXX										
		Trichlorofluoromethane				XXX										
		Vinyl chloride (Chloroethylene)				XXX										

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	Sanitary Sewer				Powerhouse Drain				Waste Treatment Centre				"Process" Sewer	
		EFFLUENT STREAM:	Process Effluent				Combined Effluent				Batch Discharge Effluent				Once Through Cooling Water	
		TOXICITY TESTS SAMPLING FREQUENCY:	Monthly				Monthly				Monthly				Quarterly	
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	Quarterly				Quarterly				Quarterly				None	
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	Quarterly				Quarterly				Quarterly				None	
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	Quarterly				Quarterly				Quarterly				None	
		FREQUENCY OF SAMPLING:	D	TW	W	M	D	TW	W	M	D	TW	W	M	D	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED														
17	Volatiles, Non-Halogenated	Benzene				XXX								XXX		
		Styrene				XXX								XXX		
		Toluene				XXX								XXX		
		o-Xylene				XXX								XXX		
		m-Xylene and p-Xylene				XXX								XXX		
25	Solvent Extractables	Oil and grease		XXX					XXX				XXX			XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)								XXX						
E1	Metals	Iron		XXX				XXX				XXX				XXX
E2	Temperature	Temperature													XXX	
		Temperature Rise													XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	01 Stream	02 Stream	03 Storm Sewer	04 Storm Sewer	05 Storm Sewer	Perch Creek
		EFFLUENT STREAM:	Storm Water	Waste Disposal Site Effluent	Storm Water	Storm Water	Storm Water	Waste Disposal Site Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None	None	None
		FREQUENCY OF SAMPLING:	M	M	M	M	M	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX	XXX	XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium		XXX				XXX
		Total Kjeldahl nitrogen		XXX				XXX
4b		Nitrate + Nitrite	XXX	XXX	XXX	XXX	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX	XXX	XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX	XXX	XXX	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX	XXX	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX	XXX	XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX	XXX	XXX	XXX	XXX
		Volatile suspended solids (VSS)						
9	Total metals	Aluminum	XXX	XXX	XXX	XXX	XXX	XXX
		Beryllium						
		Boron						
		Cadmium						
		Chromium						
		Cobalt	XXX					
		Copper	XXX	XXX	XXX	XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	01 Stream	02 Stream	03 Storm Sewer	04 Storm Sewer	05 Storm Sewer	Perch Creek
		EFFLUENT STREAM:	Storm Water	Waste Disposal Site Effluent	Storm Water	Storm Water	Storm Water	Waste Disposal Site Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None	None	None
		FREQUENCY OF SAMPLING:	M	M	M	M	M	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
9	Total metals (continued)	Lead	XXX			XXX		
		Lithium						
		Molybdenum						
		Nickel	XXX					
		Silver						
		Strontium						
		Thallium						
		Vanadium	XXX					
		Zinc	XXX	XXX	XXX	XXX	XXX	XXX
10	Hydrides	Antimony						
		Arsenic						
		Selenium						
11	Chromium (Hexavalent)	Chromium (Hexavalent)						
12	Mercury	Mercury						
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	XXX				XXX
15	Sulphide	Sulphide	XXX				XXX	XXX
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane						
		1,1,2-Trichloroethane						
		1,1-Dichloroethane						

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	01 Stream	02 Stream	03 Storm Sewer	04 Storm Sewer	05 Storm Sewer	Perch Creek
		EFFLUENT STREAM:	Storm Water	Waste Disposal Site Effluent	Storm Water	Storm Water	Storm Water	Waste Disposal Site Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None	None	None
		FREQUENCY OF SAMPLING:	M	M	M	M	M	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene						
		1,2-Dichlorobenzene						
		1,2-Dichloroethane (Ethylene dichloride)						
		1,2-Dichloropropane						
		1,3-Dichlorobenzene						
		1,4-Dichlorobenzene						
		Bromodichloromethane						
		Bromoform						
		Bromomethane						
		Carbon tetrachloride						
		Chlorobenzene						
		Chloroform	XXX		XXX	XXX		
		Chloromethane						
		Cis-1,3-Dichloropropylene						
		Dibromochloromethane						
		Ethylene dibromide						
		Methylene chloride						
		Tetrachloroethylene (Perchloroethylene)						
		Trans-1,2-Dichloroethylene						
		Trans-1,3-Dichloropropylene						
		Trichloroethylene						
		Trichlorofluoromethane						
		Vinyl chloride (Chloroethylene)						

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	01 Stream	02 Stream	03 Storm Sewer	04 Storm Sewer	05 Storm Sewer	Perch Creek
		EFFLUENT STREAM:	Storm Water	Waste Disposal Site Effluent	Storm Water	Storm Water	Storm Water	Waste Disposal Site Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None	None	None	None
		FREQUENCY OF SAMPLING:	M	M	M	M	M	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED						
17	Volatiles, Non-Halogenated	Benzene	XXX					
		Styrene	XXX					
		Toluene	XXX					
		o-Xylene	XXX					
		m-Xylene and p-Xylene	XXX					
25	Solvent Extractables	Oil and grease	XXX	XXX	XXX	XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)	XXX		XXX	XXX		
E1	Metals	Iron	XXX	XXX	XXX	XXX	XXX	XXX
E2	Temperature	Temperature						
		Temperature Rise						

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	Duke Stream	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX
4b		Nitrate + Nitrite	XXX	XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum	XXX	
		Beryllium		
		Boron		
		Cadmium		
		Chromium		
		Cobalt		
		Copper	XXX	XXX

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	Duke Stream	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
9	Total metals (continued)	Lead		
		Lithium		
		Molybdenum		
		Nickel		
		Silver		
		Strontium		
		Thallium		
		Vanadium		
		Zinc	XXX	XXX
10	Hydrides	Antimony		
		Arsenic		
		Selenium		
11	Chromium (Hexavalent)	Chromium (Hexavalent)		
12	Mercury	Mercury		
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	
15	Sulphide	Sulphide		
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		
		1,1,2-Trichloroethane		
		1,1-Dichloroethane		

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	Duke Stream	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
16	Volatiles, Halogenated (continued)	1,1-Dichloroethylene		
		1,2-Dichlorobenzene		
		1,2-Dichloroethane (Ethylene dichloride)		
		1,2-Dichloropropane		
		1,3-Dichlorobenzene		
		1,4-Dichlorobenzene		
		Bromodichloromethane		
		Bromoform		
		Bromomethane		
		Carbon tetrachloride		
		Chlorobenzene		
		Chloroform		
		Chloromethane		
		Cis-1,3-Dichloropropylene		
		Dibromochloromethane		
		Ethylene dibromide		
		Methylene chloride		
		Tetrachloroethylene (Perchloroethylene)		
		Trans-1,2-Dichloroethylene		
		Trans-1,3-Dichloropropylene		
		Trichloroethylene		
		Trichlorofluoromethane		
		Vinyl chloride (Chloroethylene)		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE G - CHALK RIVER NUCLEAR LABORATORIES

		NAME OF EFFLUENT STREAM:	Duke Stream	-
		EFFLUENT STREAM:	Waste Disposal Site Effluent	Emergency Overflow
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	M	during discharge
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED		
17	Volatiles, Non-Halogenated	Benzene		
		Styrene		
		Toluene		
		o-Xylene		
		m-Xylene and p-Xylene		
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)		
E1	Metals	Iron	XXX	XXX
E2	Temperature	Temperature		
		Temperature Rise		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE H - DOUGLAS POINT WASTE MANAGEMENT FACILITY

NAME OF EFFLUENT STREAM:			Turbine Hall Sump	Outside Sump	Radioactive Liquid Waste Management System Tank
EFFLUENT STREAM:			Potentially Contaminated Building Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None	None
FREQUENCY OF SAMPLING:			during discharge	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**			
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX	XXX
		Total Kjeldahl nitrogen			
4b		Nitrate + Nitrite			
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX	XXX
		Volatile suspended solids (VSS)			
9	Total metals	Aluminum			
		Beryllium			
		Boron			
		Cadmium			
		Chromium			
		Cobalt			

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE H - DOUGLAS POINT WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	Turbine Hall Sump	Outside Sump	Radioactive Liquid Waste Management System Tank
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Storm Water Effluent	Potentially Contaminated Building Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None	None
		FREQUENCY OF SAMPLING:	during discharge	M	during discharge
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**			
9	Total metals (continued)	Copper	XXX	XXX	XXX
		Lead			
		Lithium			
		Molybdenum			
		Nickel			
		Silver			
		Strontium			
		Thallium			
		Vanadium			
		Zinc	XXX	XXX	XXX
14	Phenolics (4AAP)	Phenolics (4AAP)			
25	Solvent Extractables	Oil and grease	XXX	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)			
E1	Metals	Iron	XXX	XXX	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE H - DOUGLAS POINT WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED	
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX
		Total Kjeldahl nitrogen	
4b		Nitrate + Nitrite	
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX
6	Total phosphorus	Total phosphorus	XXX
7	Specific conductance	Specific conductance	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX
		Volatile suspended solids (VSS)	
9	Total metals	Aluminum	
		Beryllium	
		Boron	
		Cadmium	
		Chromium	
		Cobalt	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE H - DOUGLAS POINT WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	-
		EFFLUENT STREAM:	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None
		FREQUENCY OF SAMPLING:	M
ANALYTICAL TEST GROUP		PARAMETERS TO BE ANALYZED	
9	Total metals (continued)	Copper	XXX
		Lead	
		Lithium	
		Molybdenum	
		Nickel	
		Silver	
		Strontium	
		Thallium	
		Vanadium	
		Zinc	XXX
14	Phenolics (4AAP)	Phenolics (4AAP)	
25	Solvent Extractables	Oil and grease	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)	XXX
E1	Metals	Iron	XXX

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE I - NUCLEAR POWER DEMONSTRATION WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	Turbine Hall Sump	Outside Sump
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
3	Hydrogen ion (pH)	Hydrogen ion (pH)	XXX	XXX
4a	Nitrogen	Ammonia plus Ammonium	XXX	XXX
		Total Kjeldahl nitrogen	XXX	XXX
4b		Nitrate + Nitrite		XXX
5a	Organic carbon	Dissolved organic carbon (DOC)	XXX	XXX
5b		Total organic carbon (TOC) (NOTE 1)	XXX	XXX
6	Total phosphorus	Total phosphorus	XXX	XXX
7	Specific conductance	Specific conductance	XXX	XXX
8	Suspended solids (TSS/VSS)	Total suspended solids (TSS)	XXX	XXX
		Volatile suspended solids (VSS)		
9	Total metals	Aluminum	XXX	XXX
		Beryllium		
		Boron		
		Cadmium		
		Chromium		
		Cobalt		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE I - NUCLEAR POWER DEMONSTRATION WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	Turbine Hall Sump	Outside Sump
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
9	Total metals (continued)	Copper	XXX	XXX
		Lead		
		Lithium		
		Molybdenum		
		Nickel		
		Silver		
		Strontium		
		Thallium		
		Vanadium		
		Zinc	XXX	XXX
12	Mercury	Mercury	XXX	
14	Phenolics (4AAP)	Phenolics (4AAP)	XXX	XXX
16	Volatiles, Halogenated	1,1,2,2-Tetrachloroethane		
		1,1,2-Trichloroethane		
		1,1-Dichloroethane		
		1,1-Dichloroethylene		
		1,2-Dichlorobenzene		
		1,2-Dichloroethane (Ethylene dichloride)		
		1,2-Dichloropropane		
		1,3-Dichlorobenzene		
		1,4-Dichlorobenzene	XXX	

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE I - NUCLEAR POWER DEMONSTRATION WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	Turbine Hall Sump	Outside Sump
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
16	Volatiles, Halogenated (continued)	Bromodichloromethane		
		Bromoform		
		Bromomethane		
		Carbon tetrachloride	XXX	
		Chlorobenzene		
		Chloroform		
		Chloromethane		
		Cis-1,3-Dichloropropylene		
		Dibromochloromethane		
		Ethylene dibromide		
		Methylene chloride		
		Tetrachloroethylene (Perchloroethylene)		
		Trans-1,2-Dichloroethylene		
		Trans-1,3-Dichloropropylene		
		Trichloroethylene		
		Trichlorofluoromethane	XXX	
		Vinyl chloride (Chloroethylene)		
17	Volatiles, Non-Halogenated	Benzene		
		Styrene		
		Toluene	XXX	
		o-Xylene		
		m-Xylene and p-Xylene		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE I - NUCLEAR POWER DEMONSTRATION WASTE MANAGEMENT FACILITY

NAME OF EFFLUENT STREAM:			Turbine Hall Sump	Outside Sump
EFFLUENT STREAM:			Potentially Contaminated Building Effluent	Storm Water Effluent
TOXICITY TESTS SAMPLING FREQUENCY:			None	None
CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):			None	None
CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:			None	None
OPEN CHARACTERIZATION SAMPLING FREQUENCY:			None	None
FREQUENCY OF SAMPLING:			during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
19	Extractables, Base Neutral	Acenaphthene		
		5-nitro Acenaphthene		
		Acenaphthylene		
		Anthracene		
		Benz(a)anthracene		
		Benzo(a)pyrene		
		Benzo(b)fluoranthene		
		Benzo(g,h,i)perylene		
		Benzo(k)fluoranthene		
		Biphenyl		
		Camphene		
		1-Chloronaphthalene		
		2-Chloronaphthalene		
		Chrysene		
		Dibenz(a,h)anthracene		
		Fluoranthene		XXX
		Fluorene		
		Indeno(1,2,3-cd)pyrene		
		Indole		
		1-Methylnaphthalene		
		2-Methylnaphthalene		
		Naphthalene		
		Perylene		
		Phenanthrene		

EFFLUENT MONITORING REGULATION - ELECTRIC POWER GENERATION SECTOR

SCHEDULE I - NUCLEAR POWER DEMONSTRATION WASTE MANAGEMENT FACILITY

		NAME OF EFFLUENT STREAM:	Turbine Hall Sump	Outside Sump
		EFFLUENT STREAM:	Potentially Contaminated Building Effluent	Storm Water Effluent
		TOXICITY TESTS SAMPLING FREQUENCY:	None	None
		CHARACTERIZATION SAMPLING FREQUENCY (except for ATG 24):	None	None
		CHARACTERIZATION SAMPLING FREQUENCY FOR ATG 24:	None	None
		OPEN CHARACTERIZATION SAMPLING FREQUENCY:	None	None
		FREQUENCY OF SAMPLING:	during discharge	M
ANALYTICAL TEST GROUP		**PARAMETERS TO BE ANALYZED**		
19	Extractables, Base Neutral (continued)	Pyrene		
		Benzyl butyl phthalate		
		Bis(2-ethylhexyl) phthalate		
		Di-n-butyl phthalate		
		4-Bromophenyl phenyl ether		
		4-Chlorophenyl phenyl ether		
		Bis(2-chloroisopropyl)ether		
		Bis(2-chloroethyl)ether		
		2,4-Dinitrotoluene		
		2,6-Dinitrotoluene		
		Bis(2-chloroethoxy)methane		
		Diphenylamine		
		Diphenyl Ether		
		N-Nitrosodiphenylamine		
		N-Nitrosodi-n-propylamine		
25	Solvent Extractables	Oil and grease	XXX	XXX
27	Polychlorinated Biphenyls (PCBs) (Total)	(PCBs) (Total)	XXX	
E1	Metals	Iron	XXX	XXX

PART D

EXPLANATORY NOTES
TO THE
DRAFT EFFLUENT MONITORING REGULATION
FOR THE
ELECTRIC POWER GENERATION SECTOR

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PART D EXPLANATORY NOTES TO THE DRAFT EFFLUENT MONITORING REGULATION FOR THE ELECTRIC POWER GENERATION SECTOR

INTRODUCTION

The Explanatory Notes provide, where appropriate, an expanded description of each of the sections in the Draft Effluent Monitoring Regulation for the Electric Power Generation (EPG) Sector in order to further the reader's understanding of the monitoring regulation requirements.

In conjunction with the protocols and procedures outlined in Ontario Regulation 695/88, the General Effluent Monitoring Regulation, the EPGS Regulation specifies the effluent monitoring requirements for each discharger, including sampling, analysis, flow measurement, toxicity testing and reporting.

SECTION 1: DEFINITIONS

This section does not redefine terms which are already defined in the Environmental Protection Act under which the EPGS Regulation is written.

This section of the Regulation provides:

- clarification of terms used in the Regulation that could have several interpretations;
- definitions of technical terms used in the Regulation which may not be in common usage;
- definitions for those terms which have a different meaning in the Regulation than those found in a dictionary or through common use;
- definitions of terms with an alternate use in the EPGS Regulation from that in the General Regulation; and
- definitions of terms specific to the EPG Sector.

Subsection 1(2) states that the definitions in section 1 of the General Regulation also apply to this Regulation. However, any re-defined term in the EPGS Regulation supercedes that of the General Regulation.

All of the definitions in the General Regulation have been applied to the EPG Regulation with the following exceptions:

- characterization has been redefined in the EPGS Regulation to reflect the EPG Sector characterization list;

- batch discharge has been redefined in the EPGS Regulation to reflect the EPG Sector batch discharges as indicated in the monitoring schedules. The batch discharges occur at the oily water separators at some nuclear-powered TGS. All batch discharges are process effluents which are discharged on an event basis.

- once-through cooling water sampling point has been redefined in the EPGS Regulation to reflect the monitoring point after the addition of process effluents where applicable.

The following definitions are included in the EPGS Regulation rather than the General Regulation as they are referred to only in the context of the EPG Regulation:

- boiler blowdown effluent;
- boiler blowdown effluent sampling point;
- boiler blowdown effluent stream;
- coal pile effluent;
- coal pile effluent sampling point;
- coal pile effluent stream;
- equipment cleaning effluent;
- equipment cleaning effluent sampling point;
- equipment cleaning effluent stream;
- event discharge effluent;
- event discharge effluent sampling point;
- event discharge effluent stream;
- potentially contaminated building effluent;
- potentially contaminated building effluent sampling point;
- potentially contaminated building effluent stream;
- process change;
- station.

SECTION 2: PURPOSE

The purpose of the EPGS Regulation is to establish a data base on effluent quality in the Electric Power Generation Sector that, along with other pertinent information such as available treatment technology, will be used in the development of effluent limits for the EPG Sector. The data base will also be used to calculate the mass loadings of monitored contaminants discharged into surface watercourses.

SECTION 3: APPLICATION

Section 3 lists the electric power generation stations and associated facilities to which this Regulation applies and indicates that there are subsector-specific and site-specific monitoring schedules within the Regulation which apply to each station or facility.

The link with the General Regulation is established by stating that all monitoring obligations of the EPGS Regulation shall be carried out in accordance with the General Regulation and that this Regulation is a Sectoral Effluent Monitoring Regulation in the context of the General Regulation.

Subsection 3(5) states that the requirements for boiler blowdown effluent to be similar to the monitoring obligations for process effluent. This section specifies that the obligations for process effluent as listed in the General Regulation are to be used for boiler blowdown effluent.

Subsection 3(6) states that the requirements for the coal pile effluent in accordance with the monitoring obligations for storm water. This section specifies that the obligations for storm water as listed in the General Regulation are to be used for coal pile effluent.

Subsection 3(7) states the requirements for the following effluents:

- equipment cleaning effluent
- potentially contaminated building effluent

The above listed effluents will be required to satisfy the monitoring obligations in accordance with those required by the General Regulation for waste disposal site effluent.

Subsection 3(8) states that the requirements for the event discharge effluent in accordance with the monitoring obligations for process effluent. This section specifies that the obligations for process effluent as specified in the General Regulation are to be used for event discharge monitoring.

Subsection 3(9) states that the requirements performed by persons other than the direct discharger. That is, a consultant or laboratory that collects and/or analyses the samples for the discharger has in effect carried out the obligations of that discharger.

In case of conflicting requirements, it is the intent of the Ministry that the MISA Regulation requirements shall replace the monitoring requirements for those effluents under Certificates of Approval or Control Orders for the duration of the Regulation. This override will not extend to any effluent stream not monitored in the Regulation and for which monitoring is required to assess the performance of various treatment systems or processes.

SECTION 4: SAMPLING POINTS

This section specifies that a sampling point must be established by the direct discharger for each effluent stream specified in the subsector and site-specific monitoring schedules. These sampling points must be used for all sampling required by the EPG Regulation unless an alternate sampling location is deemed acceptable by a Regional Director of the Ministry of the Environment.

Individual process effluent and combined effluent streams may be sampled at the respective specified frequencies on different days within the month. It should be noted that not all stations within a subsector (e.g. fossil-fuelled thermal generating stations) have all the effluent streams listed in the monitoring schedules (e.g. mothballed stations do not have the various process effluents).

The once-through cooling water temperature measurement points may be different than the effluent sampling points, as equipment is already installed in most cases. Also, the intake temperature is required, but no intake sampling is specified.

SECTION 5: CHARACTERIZATION / OPEN CHARACTERIZATION

Characterization samples must be collected and analyzed according to the principles and protocols outlined in sections 3 and 4 of the General Regulation for sampling and analysis respectively.

The subsector-specific and site-specific monitoring schedules for each direct discharger indicate the required frequency for performing characterization sampling and analyses on process effluent, batch discharge, combined effluent and boiler blowdown effluent samples under the Regulation.

Characterization is specified on a quarterly basis as outlined in the EPG Regulation development document. Sampling intervals are specified in the Regulation to ensure that the samples are representative of discrete events and to provide an indication of seasonal impact on the effluents.

Collection of the samples for analysis for characterization should be on the same day as samples for toxicity tests are required. This will provide a longer list of pollutants to assist in the proper assessment of toxicity tests.

Characterization requires collecting and analyzing a sample for the parameters listed in Column 2 of Schedule AA in the Regulation, which lists conventional parameters and the EPG Sector List. The following analytical test groups are required for characterization:

- Group 1 Chemical Oxygen Demand (COD);
- Group 2 Cyanide;
- Group 3 Hydrogen ion (pH);

Group 4a	Ammonia plus Ammonium; Total Kjeldahl nitrogen;
Group 4b	Nitrate + Nitrite;
Group 5a	Dissolved Organic Carbon (DOC);
Group 5b	Total Organic Carbon (TOC) (only if TSS > 15 mg/L);
Group 6	Total Phosphorus;
Group 7	Specific conductance;
Group 8	Total Suspended Solids (TSS); Volatile Suspended Solids (VSS);
Group 9	Total metals;
Group 10	Hydrides;
Group 11	Chromium (Hexavalent) (only if Total Cr > 1 mg/L);
Group 12	Mercury;
Group 14	Phenolics (4AAP);
Group 15	Sulphide;
Group 16	Volatiles, Halogenated;
Group 17	Volatiles, Non-Halogenated;
Group 19	Extractables, Base Neutral;
Group 20	Extractables, Acid (Phenolics);
Group 23	Extractables, Neutral Chlorinated;
Group 24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans;
Group 25	Solvent Extractables;
Group 27	PCBs (Total).
E1	Iron
E3	TRC (Total Residual Chlorine)
E4	Diethanolamine

COD is a requirement for characterization but not for routine monitoring. COD has been included to provide a comparison with DOC and also to give an indication of the presence of oxidizable material other than organics, such as metals. COD is a measure of the maximum oxidizable material in the effluent.

Analytical test group 2 (Cyanides) are not included for routine monitoring as they were not found in this sector as evidenced by pre-regulation monitoring analysis.

Analytical test groups 13 (total alkyl lead) and 18 (Volatiles, water soluble) are excluded as they are not applicable to this sector. No evidence of their presence was indicated in the pre-regulation monitoring data base. Also, these chemicals are not used at the sector sites.

Analytical test groups 21 (Extractables, Phenoxy Acid Herbicides) and 22 (Extractables, Organochlorine Pesticides) are excluded from characterization as they are not listed on EMPPL and are currently not manufactured in Ontario. Groups 26a (Fatty Acids) and 26b (Resin Acids) are currently excluded from characterization because there are no validated analytical protocols for these.

Analytical data from daily, thrice weekly, weekly and monthly sampling may be used toward fulfilling the characterization requirements, provided that all samples were taken on the same day and that protocols required for characterization were followed.

Open characterization (open scan) of the samples is required at the same frequency as characterization, to determine the presence of both organic compounds and inorganic elements which are currently not on EMPPL. Any compounds identified in open characterization, not on EMPPL, will be screened through a hazard assessment procedure and added to EMPPL if appropriate.

MONITORING

The requirements for monitoring of effluents are specified in sections 6 through 16 of the EPG Regulation.

All monitoring samples must be collected and analyzed according to the principles and protocols outlined in sections 3 and 4 of the General Regulation for sampling and analysis respectively.

SECTION 6: DAILY MONITORING

All process effluent, combined effluent, batch discharge effluent or boiler blowdown effluent must be monitored for the following analytical test groups:

- Group 3 Hydrogen ion (pH);
- Group 7 Specific conductance.

It is preferable that these parameters be monitored continuously using on-line analyzers to provide a record of the variability. However, the samples may be collected and analyzed using composite sampling method.

Requests to use on-line analyzers for monitoring of parameters other than pH or specific conductance must be submitted to the Ministry for approval by the Regional Director along with sufficient data to prove that it meets MISA standards.

Subsection 4(18) of the General Regulation requires a monthly sample to be collected from each sampling point at which an on-line analyzer is used and analyzed for the parameters for which the on-line analyzer is monitoring. This will provide an indication of the accuracy of the on-line analyzer by providing an average value around which the on-line analyzer data should fluctuate.

For all process effluents, combined effluents, batch discharge effluent and boiler blowdown effluent, daily pH and specific conductance analyses are required. In addition, stations which have biological treatment(sewage treatment plants or ash transport water treatment systems must monitor for total suspended solids (TSS) on a daily basis.

Where sites are already monitoring specific parameters on a daily basis, other than those listed above, they will continue to do so (e.g. continuous monitoring of condenser cooling water intake and outfall temperature).

SECTION 7: THRICE-WEEKLY MONITORING

All process effluents, combined effluent, batch discharge effluent and boiler blowdown effluent at fossil-fuelled thermal and nuclear-powered thermal generating stations must be analyzed on a thrice-weekly basis for the following analytical test parameters:

- Copper, Zinc, Iron

Monitoring for conventional and priority pollutants is required on an effluent-specific basis as outlined in the development document technical rationale.

SECTION 8: WEEKLY MONITORING

All process effluents, combined effluents, batch discharge effluent and boiler blowdown effluent must be analyzed on a weekly basis, if not already monitored at a higher frequency, for some or all of the following analytical test groups as outlined in the technical rationale.

-	Group 4a,4b	Nitrogen
-	Group 6	Total phosphorus
-	Group 9	Total metals (all for fossil-fuelled only)
-	Group 10	Hydrides
-	Group 11	Chromium (Hexavalent)
-	Others	if found > = MDL

A minimum of four days between consecutive weekly samples is required in order to increase sample randomness.

Weekly samples must be collected on the same day as the thrice weekly samples for the same effluent stream in order to provide as complete a set of analytical data on a given day as possible.

SECTION 9: MONTHLY MONITORING

Process effluents, combined effluents, batch discharge effluent and boiler blowdown effluent, may require monthly analysis for any or all of the following analytical test groups based on effluent-specific considerations as outlined in the EPG Regulation development document:

Group 9	Total metals;
Group 10	Hydrides;
Group 11	Chromium (Hexavalent) (only if Total Cr > 1 mg/L);
Group 12	Mercury;
Group 14	Phenolics (4AAP);
Group 15	Sulphide;
Group 16	Volatiles, Halogenated;
Group 17	Volatiles, Non-Halogenated;
Group 19	Extractables, Base Neutral;
Group 20	Extractables, Acid (Phenolics);
Group 23	Extractables, Neutral Chlorinated;
Group 24	Chlorinated Dibenzo-p-dioxins and Dibenzofurans;
Group 27	PCBs (Total).

An interval of two weeks between successive monthly samples is required in order to provide independent samples over as wide a range of operating conditions as possible.

Monthly samples must be collected on the same day as the thrice weekly samples for the same effluent stream in order to provide as complete a set of analytical data on that day as possible.

SECTION 10: EVENT DISCHARGE EFFLUENT MONITORING

The following effluent are event discharge effluents and shall require event monitoring:

- Heavy Water Plants Effluent Lagoon. The main process effluent stream is diverted into this lagoon when hydrogen sulphide levels exceed discharge limits set under the C of A. Twelve samples and 4 characterizations are required over the twelve month monitoring period. No toxicity tests are required.

- Oily Water Separators at nuclear-powered thermal generating stations. These are located at Bruce NGS-A, Bruce NGS-B, Pickering NGS and Darlington NGS, and usually discharge at least once every week. No toxicity tests are required on the Bruce NGS-A and Bruce NGS-B oily water separators. All the oily water separators shall require a minimum of twelve samples and 4 characterizations, 12 toxicity tests (exceptions noted above) over the twelve month monitoring period.

- Treated coal pile effluents at Lakeview TGS and Lambton TGS are event discharge effluents. The Lakeview coal pile effluent treatment lagoons are usually discharged about five to ten times each year. The coal pile effluent at Lambton TGS is discharged into Lake Lambton which is periodically drained down into the St. Clair River through a ditch. The treated coal pile effluent shall require a minimum of twelve samples, 4 characterizations and 12 toxicity tests over the twelve month monitoring period. When there is no discharge in any month, the partially-treated effluent from the treatment lagoons at Lakeview TGS and Lake Lambton at Lambton TGS, respectively, may be sampled instead.

SECTION 11: MONITORING - BOILER BLOWDOWN

The generation of high-pressure steam is one of the most important steps in electric power generation at both fossil-fuelled and nuclear-powered thermal generating stations. Continuous and/or intermittent discharge of about one percent of the water in the steam cycle is required for the proper operation of the steam boilers. This discharge is called boiler blowdown effluent and is classified as a process effluent.

Boiler blowdown effluent is monitored at each of the fossil-fuelled and nuclear-powered generating stations on a rotational basis for each of the boiler units at a station. This requirement reflects the fact that the boiler blowdown effluent should be consistent across the boiler units at the stations. The rotational schedule (see Schedule 6 in the Technical Rationale) provides for a minimum of twelve samples to be collected from each station, regardless of the number of boiler units at a station. This method provides for rotation on a monthly basis between the generation units at a station and for sampling each operational unit a minimum of twice per year. Sampling for individual units will be spread over the year.

The sampling schedule (choice of months) for individual units is to be determined based on factors such as unit outage schedule and the transfer of sampling equipment between units. To the extent allowed by the operating schedule, the sampling months for each unit will be spread evenly throughout the year. Schedule 6 is an example of such a schedule for the fossil-fuelled and nuclear-powered thermal generating stations.

Sampling requirements for boiler blowdown are defined specifically for this stream. Flow proportional samplers will not be used for boiler blowdown because the effluent flow will not be measured but, instead, will be estimated from boiler water make-up rates (see pg D-14). Also, boiler blowdown samples at Pickering NGS can be obtained from existing sampling lines from the boiler. These samples are considered representative because they are obtained from a point in the boiler which is adjacent to the point from which boiler blowdown discharges.

SECTION 12: MONITORING - ONCE-THROUGH COOLING WATER (OTCW)

A monthly sample of a once-through cooling water effluent stream should be collected on the same day as the process effluent streams which are being discharged to the OTCW in order to provide a better indication of the quality of this stream at that point in time. The once-through cooling water effluent is generally discharged through the final outfall at each thermal generating station (both fossil-fuelled and nuclear). The various effluent streams such as: water treatment plant neutralization sump, boiler blowdown, ash transport water system, oily water separators, and yard and sump drains; all normally discharge into the once-through cooling water. This final outfall will be treated as a once-through cooling water stream in this Regulation.

Special Note: Temperature of the OTCW intake and discharge are monitored continuously at fossil-fuelled and nuclear-powered thermal generating stations, and at the Bruce Heavy Water Plants. These temperature readings will be reported as daily averages under this Regulation.

Intake and outfall daily average temperatures will be reported for the Chalk River Nuclear Laboratory nuclear reactors as well.

Monitoring of total residual chlorine (TRC) for a representative condenser cooling water at a condenser box during chlorination, at those sites using chlorination, shall be required should an acceptable monitoring protocol be developed by the MOE prior to promulgation of this Regulation.

SECTION 13: MONTHLY MONITORING - STORM WATER AND COAL PILE EFFLUENT

A total of 12 samples, including two samples taken during thaw events, are required during storm water discharges at each affected storm water sampling point. Thaw samples are needed to provide an indication of the losses of contaminants during the winter months.

In cases where samples cannot be collected from a storm water sampling point because of a lack of sufficient volume of discharge, an additional set of samples must be collected in the following month in order to provide a total of 12 data points.

Samples should be collected towards the beginning of the discharge in order to catch the "first flush" effects. However, in cases where a retention structure is available to provide holdup time, a sample representative of the contents of the structure may be collected directly from the structure prior to its discharge.

The list of parameters to be analyzed reflect the process and plant areas from which the storm water originates and passes through. Pre-regulation monitoring data was used for defining monitoring requirements.

In the General Regulation, reference is made to "developed areas" in context of the storm water definition. Within the EPG Sector, the following criteria are intended to be used:

1. "Developed Area" is an outdoor area within the station boundary which routinely contains chemicals, except demineralized water, either in bulk storage, system equipment, or waste storage.

2. At nuclear-powered thermal generating stations these areas include, but, are not limited to:

   a) Combustion turbine unit fuel storage area
   b) Lube oil storage tank farm
   c) Main, system and distribution transformers
   d) Acid and caustic storage tanks
   e) Bulk chemical loading and unloading areas
   f) Switch yards

3. At fossil-fuelled thermal generating stations these areas include, but, are not limited to:

   a) Same as above
   b) Fuel oil storage area/tank farm
   c) Yard drains from uncontained coal, ash and oil loading, unloading, or handling areas.
   d) Yard drains from the vicinity of coal piles and yard ash handling equipment

4. All other sites as per site specific schedules in the regulation.

5. Where similar catchment areas are being drained, representative catchment area sampling will be permitted with approval of the Director.

SECTION 14: MONTHLY MONITORING - WASTE DISPOSAL SITE EFFLUENT

Samples are only required monthly if a discharge of waste disposal site effluent occurs. The discharge of effluent will originate primarily as a result of a storm event. Therefore, the samples should be collected towards the beginning of the discharge to catch the "first flush" effects, as noted in section 13.

SECTION 15: EVENT MONITORING - EQUIPMENT CLEANING EFFLUENT AND POTENTIALLY CONTAMINATED BUILDING EFFLUENT

Samples are only required monthly if discharges of equipment cleaning effluent and potentially contaminated building effluent occur. The discharge of effluent will originate primarily as a result of station sump discharges at high level, the cleaning of boilers and air preheaters, and boiler wet-layup discharges.

SECTION 16: EVENT MONITORING - EMERGENCY OVERFLOW

Monitoring of emergency overflows is intended to measure effluents which discharge directly to a surface watercourse while bypassing all designated sampling points at the site. An overflow which discharges to a treatment system need not be monitored under this Regulation.

SECTION 17: QUALITY CONTROL MONITORING

Each of the quality control samples to be collected provides different information about the quality of the effluent samples collected and indicates possible field contamination. Only process effluents and combined effluent will require field quality control samples, as these effluents will be monitored to a greater extent and will be used in the development of effluent limits. Information obtained from the quality control samples will be used as an indicator of sampling variability for other effluents.

Monthly analyses of quality control samples from one process effluent or combined effluent stream are required for those parameters which are analyzed on a daily or thrice weekly basis. The quality control samples are collected on the same days as the daily and thrice weekly samples specified in Sections 6 and 7. Quarterly analyses are required for those parameters which are analyzed on a weekly or monthly basis and are collected on the same day as the weekly and monthly samples specified in Sections 8 and 9.

Quality control samples are to be collected from a combined effluent sampling point only if there are no process effluent sampling points at that particular site. The effluent stream selected should be that with the most comprehensive analytical requirements and should include parameters from analytical test groups 1 - 27.

A duplicate sample provides a measure of the reproducibility of sampling techniques used at the site, including the integrity of the sample containers.

A travelling blank sample will provide an indication of any problems with sample contamination due to extraneous volatile fractions of contaminants in the atmosphere and any contaminants introduced by handling of the sample containers. Analytical test groups 1 (COD), 3 (pH) and 8 (TSS/VSS) are excluded from the analysis.

Travelling blanks for COD and TSS/VSS are relatively ineffective. Gross contamination would be required to be detected at the ppm levels of detection for these tests. No information relevant to samples is to be gained for pH on a travelling blank of distilled water.

A travelling spiked blank sample should provide an indication of the degree of degradation of the target parameters from the time of sampling to analysis, which in turn may indicate degradation of the target parameters in the effluent sample itself. Only analytical test groups 16, 17, 19 through 20, 23, 24 and 27 are to be analyzed as they are most likely to volatilize or degrade in the unpreserved solution.

Travelling spiked blanks are not required for the conventional parameters and metals. Inorganic parameters in samples are stable. Most of the samples are either preserved or are analyzed within very short time periods.

The travelling spiked blank samples must be prepared with a standard solution which contains all of the parameters in the analytical test groups for which the analyses are required.

Additional quality control samples are to be analyzed and prepared by the laboratory, as outlined in section 4 of the General Regulation. These samples will provide an indication of analytical variability and laboratory contamination due to the analytical procedures.

SECTION 18: TOXICITY TESTING

Section 5 of the General Regulation specifies the test protocols which must be followed for the fish toxicity test and the Daphnia magna acute lethality toxicity test.

Toxicity test samples are to be collected at each process effluent, combined effluent, boiler blowdown effluent, event discharge effluent and batch discharge effluent sampling point.

Event discharge effluents at Bruce NGS-A and Bruce NGS-B do not require toxicity testing since they discharge into RLWMS Tanks. Also, water treatment plant neutralization sump process effluents discharging through ash transport water treatment systems do not require toxicity testing.

The samples must be collected on the same day as the monthly routine monitoring samples for the same effluent stream in order to aid in the interpretation and possible correlation of the chemical analyses and the resultant biological effects.

Effluent samples used for the fish toxicity and Daphnia magna tests are to be taken from the same sample container or set of containers in order to minimize the likelihood of sample differences.

The use of 100% undiluted test solutions only, in place of the full series of dilutions, is permitted for the fish toxicty test **except for boiler blowdown effluents**, as follows. A 100% undiluted test solution may be used if 3 consecutive monthly tests result in no more than 2 fish deaths at each effluent concentration. Full serial dilution tests would be reinstated where 100% undiluted test solution results in more than 2 fish deaths. Resumption of the 100% undiluted tests is allowed if 3 consecutive full dilution tests result in no more than 2 fish deaths at each concentration level.
It is not unusual for one fish in a serial dilution sample to suffer mortality due to natural causes. Therefore, mortality greater than two fish in most cases would be an indication of some effluent lethality.

The **use of 100% undiluted test solutions only**, in place of the full series of dilutions, **is not permitted** for the Daphnia magna tests on process, combined, batch discharge, event discharge and boiler blowdown effluents. Substantially less information is available about the effects of Ontario's effluents on Daphnia magna and, therefore, a full 12 months of testing is required.

Toxicity tests are required for once-through cooling water streams to verify their non-lethality. The toxicity samples must be collected on the same day as the routine monthly monitoring samples for that stream in order to provide a correlation of the chemical analyses and the resultant biological effects.

A 100% undiluted test solution may be used for all quarterly once-through cooling water samples after the initial test where the fish toxicity test results in mortality for no more than 20% of the population at each effluent concentration. Full serial dilution tests would be reinstated where the 100% undiluted test solution results in mortality greater than 20% of the population.

Special Note: Toxicity Testing of Radioactive Liquid Waste Management System (RLWMS) Tanks at nuclear-powered thermal generating stations:

Monthly samples will be screened on the basis of the following criteria:

Tritium:	less than 100 u Ci/Kg.
Gross gamma:	less than 0.25 u Ci/Kg.

It is expected that the chemical composition of the tanks meeting these criteria would represent all of the tank discharges.

Special Note: Boiler blowdown, previously, was thought to possibly be toxic to fish and/or Daphnia magna at 100% strength due to the demineralized nature of the water. Subsequent testing performed by the MOE and Ontario Hydro found that demineralized water did not cause the mortality of fish, while boiler blowdown effluent at low dilutions did. Dilution series tests should be carried out for this effluent.

SECTION 19: FLOW MEASUREMENT

Protocols and procedures for flow measurement are outlined in section 6 of the General Regulation.

Flow measurement accuracy requirements are a function of stream type. An accuracy of ±7% is required for process, batch discharge, event discharge, and boiler blowdown effluent streams in order to establish accurate loadings on those streams with the greatest potential for impact. An accuracy of ±20% is required for all other stream types, including combined effluent streams, in order to provide an estimate of the loadings and to determine their potential for impact.

While continuous flow measurement of combined effluent streams to ±7% is preferred and would generally provide a more accurate determination of loadings, the Regulation allows for continuous flow measurement of a combined effluent stream to be accurate to ±20%.

The measurement of flow in a process effluent stream may require the use of both a primary and secondary flow measurement device. Typical primary measurement devices which may be employed include:

- parshall flumes;
- weirs;
- orifice plates;
- magnetic flowmeters;
- venturi meters.

Secondary measurement devices are typically electronic interfaces with the primary devices which interpret the measurements and convert them to usable flow data. These data are commonly presented in a continuous chart form or discrete readout. A continuous chart is preferred to provide a record of the flow variability.

In cases where a storm water effluent, coal pile effluent, potentially contaminated building effluent, equipment cleaning effluent, or waste disposal site effluent is collected in a retention structure prior to discharge, the volume discharged may be measured using the change in level of the waste water in the retention structure.

Special Note: Flow measurement for boiler blowdown may be estimated by boiler feedwater make up or an alternate acceptable to the Director.

In the case of RLWMS tank batch discharge effluent, flow may be calculated from the tank geometry and difference in levels of liquid discharged in a given time interval.

The General Regulation requires that good maintenance and calibration practices for the measurement devices be followed.

SECTION 20: REPORTING

Section 7 of the General Regulation outlines the reporting requirements for each direct discharger. The contents of an Initial Report to be submitted prior to monitoring under the Regulation are outlined in the General Regulation.

All information which is considered by the station to be confidential business information must be so identified on each page submitted to the Ministry.

The Initial Report must be submitted to the Regional Director of the Ministry seven days after the first day of the third month following promulgation of the Regulation. This report is intended to provide the Ministry with a clear understanding of plant processes and the procedures each plant will follow in carrying out the requirements of this Regulation. Four copies of the Initial Report, including any attachments, should be provided.

A guidance document will be available from the Ministry prior to promulgation of the EPG Regulation to provide assistance in preparing the Initial Report.

Results from all analyses performed by the laboratory must be reported, including all positive numerical values at or above the laboratory calculated method detection limit. This includes results from all analyses required by the EPG Regulation as well as the results from the monthly analyses for verification of on-line analyzer performance required by subsection 4(18) of the General Regulation.

In cases where a laboratory has a method detection limit lower than the maximum allowed by the Regulation, all positive values below the MISA method detection limit and above the calculated laboratory MDL must be reported. This will ensure that accurate data is reported.

Flow measurement information must be reported for all process effluent, boiler blowdown effluent, combined effluent, batch discharge effluent, event discharge effluent, and once-through cooling water streams. The duration and approximate volume of discharges of storm water, coal pile effluent, equipment cleaning effluent, potentially contaminated building effluent, waste disposal site effluent and emergency overflow is to be reported.

The date and duration of each storm event, the amount of rainfall and the approximate duration of each discharge is required. This information is required in order to correlate the analytical data with the event which occurred. A heavy rainfall or a close succession of storm events may lead to dilution, not only of the storm water but also other effluents, and thereby impact the analytical results.

A schedule of the sampling dates and times for monthly and characterization sampling is required for Ministry inspection purposes. Inspection samples will be collected for the Ministry concurrent with the collection of samples by the plant site. Sampling procedures used at the plant will also be inspected during Ministry inspections.

The quantities of chemicals added to once-through cooling water are required in order to provide a greater understanding of the potential and degree of contamination. Routine monitoring on its own will not provide sufficient information as the analyses may not be performed for the added chemicals.

The quantities of oil and grease, lubricants, seal oils, transformer oils, hydraulic fluids, and chemicals consumed at hydraulic generating stations (all 68) will provide an indication of loadings to the environment.

A flow variability report, as specified in subsection 3(5) of the General Regulation, is required for each process effluent stream from which samples are collected other than by means of an automatic flow proportional composite sampling device. This report is intended to be used by the plant to show that the effluent flow is non-variable and therefore would not require flow proportional sampling for further collection of samples. Failure to provide this report will designate the effluent stream as a variable flow stream requiring flow proportional sampling within 3 months of the report due date. Flow proportional sampling will thus begin no later than the end of the twelve month monitoring period. The on-going use of approved on-line analyzers for daily monitoring of final discharges will continue to be permitted.

A report detailing any equipment malfunctions or any other problems such as unit/station shutdown or plant outages which interfere with carrying out the requirements of both the General and EPG Regulations, and the remedial action taken, must be provided. The reasons for non-compliance with the requirements, as documented in this report, may be taken into consideration by abatement and enforcement staff investigating an act of non-compliance.

It is prudent to have backup systems available for critical elements to minimize the chances of non-compliance.

All other records which are required to be kept by this Sector are primarily for inspection purposes to ensure compliance with this Regulation. The records should be kept for a period of two years beyond the submission of the last report in compliance with the requirements of the EPG Regulation.

SECTION 21: TIMING

The Initial Report is required prior to seven days after the first day of the fourth month following promulgation of the Regulation.

The sampling, analytical, flow measurement, toxicity testing and reporting requirements come into force the first day of the sixth month after promulgation of the Regulation. The implementation period of about five months is intended to provide sufficient time to allow the plant site to purchase and install equipment, negotiate contracts with laboratories, set up their monitoring programs, and train personnel.

The requirements of sections 5, 7 to 16 and 18 and subsections 20(5) and 20(6) and 20(8) are revoked one year after coming into force. In order to provide sufficient monitoring during the period before the Effluent Limits Regulation is in place, the daily monitoring requirements for process effluents, combined effluents, batch discharge effluents, and boiler blowdown outlined in section 6 will remain in force. Only conventional daily parameters will be monitored.

The daily samples must be collected and analyzed according to the principles and protocols followed during the twelve month monitoring period. Flow measurement of these streams must continue with the accuracy specified in the General Regulation. Reporting of all analytical and flow measurement results is required according to the General Regulation. Characterization and toxicity testing will not continue under this Regulation beyond 12 months.

Subsection 21(4) of this section allows the Regional Director of the Ministry to suspend the monitoring requirements in sections 4 through 18 of the Regulation for a specific effluent stream. This subsection is intended to allow a plant to suspend monitoring if the effluent no longer exists (i.e. it is re-routed to treatment or it is no longer produced) or if the stream classification is changed.

PART E

MISA ADVISORY COMMITTEE REPORT REGARDING THE DEVELOPMENT DOCUMENT FOR THE DRAFT EFFLUENT MONITORING REGULATION

FOR THE

ELECTRIC POWER GENERATION SECTOR

Ontario
Ministry of the Environment
Ministère de l'Environnement

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June 7, 1989

The Honourable Jim Bradley
Minister of the Environment
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

Dear Mr. Minister:

Attached is the MISA Advisory Committee Report Regarding the Draft Effluent Monitoring Regulations for the Electric Power Generation Sector provided in response to your request for review.

The report has the unanimous support of MISA Advisory Committee members, including the representative of the Electric Power Generation Sector, Mr. Mike Northfield.

The Committee commends the participants in the presentation of a draft regulation package which represents considerable effort.

Respectfully submitted,

for

Jim MacLaren, Chairman
for the MISA Advisory Committee

ONTARIO MINISTRY OF THE ENVIRONMENT
MUNICIPAL/INDUSTRIAL STRATEGY FOR ABATEMENT

MISA ADVISORY COMMITTEE

REPORT regarding the EFFLUENT MONITORING REGULATIONS FOR THE ELECTRIC POWER GENERATION SECTOR

June 1989

Jim MacLaren
Chairman

Mike Northfield, Ontario Hydro
representative for the
Electric Power Generation Sector

MISA ADVISORY COMMITTEE REPORT regarding the DRAFT EFFLUENT MONITORING REGULATIONS for THE ELECTRIC POWER GENERATION SECTOR **June 1, 1989**

1. INTRODUCTION

The documents comprising the draft Effluent Monitoring Regulations for the Electric Power Generation Sector [EPGS] were referred by the Minister of the Environment to the MISA Advisory Committee on April 21, 1989 in advance of Committee Meeting 47 held on April 28th. At the meeting, the Committee received input from Ministry staff and representatives of the sector. Officials of Atomic Energy Canada Limited (AECL) were observers to the meeting.

The Committee member and representative for the Electric Power Generation Sector was Mike Northfield, Ontario Hydro Manager for Environmental Protection. Dr. Monica Campbell was originally the MISA Advisory Committee's observer to the Joint Technical Committee, and was replaced on an interim basis by Dr. Don Mackay following her resignation in May 1988.

As reports became available, Ontario Hydro furnished the Advisory Committee with copies detailing the results of pre-regulation monitoring programs undertaken at the representative facilities.

2. ADVICE TO THE MINISTER

The MISA Advisory Committee has reviewed the draft regulation package, and generally finds it consistent with previous approaches. The Committee believes that if implemented, the regulation would satisfy MISA requirements and therefore recommends that **the regulation package be released for public scrutiny.**

3. REGULATION-SPECIFIC RECOMMENDATIONS

i) Premonitoring suggests that certain EPGS facilities with regard to water contamination are "less than BATEA". Ontario Hydro accepts this fact and has indicated a willingness to identify these situations at an early date and initiate design and Best Management Practice changes to improve operations. MAC welcomes Hydro's willingness to realize immediate improvements to inadequate situations.

ii) Hydro has expressed concern about its ability to meet deadlines in view of possible protracted approval processes, especially involving nuclear installations. MAC is reluctant to slow progress towards BATEA because of such factors. It has been clear for over a year that such approvals would be needed, and the need to get on with the program.

iii) In general, the MISA Advisory Committee supports the proposed monitoring frequencies, but recognizes that there may be opportunity for some reduction in areas such as boiler blowdown.

Accordingly, MAC recommends that the regulations be published, but during the public review period, the JTC be asked to re-examine the Reg with a view to (i) further examine the extent of monitoring requirements to better focus the efficiency of analysis; (ii) identify measures which will avoid regulatory delays; (iii) identify obvious areas where premonitoring has shown that improvement is needed. If Hydro agrees to make such improvements, in the short term, reduced monitoring may be acceptable.

MAC recommends that the Ministry undertake active negotiation with Atomic Energy of Canada Limited and the Federal Government to secure AECL's participation within the Monitoring Regulation.

MAC recommends that current radionuclide monitoring be reported within the MISA framework and incorporated into the monitoring database.

MISA Advisory Committee Report regarding the Draft Monitoring Regulations for the Electric Power Generation Sector:

Submitted, June 7, 1989

MISA ADVISORY COMMITTEE

J.W. MacLaren.

Jim MacLaren, Chairman

Clare

Harvey Clare, Member

Isobel Heathcote

Isobel Heathcote, Member

Paul Hebert

Paul Hebert, Member

Joanna Kidd

Joanna Kidd, Member

Don Mackay

Don Mackay, Member

Kai Millyard

Kai Millyard, Member

Paul

Paul Muldoon, Member

Mike Northfield, Member, representing
the Electric Power Generation Sector

PART F

MINISTRY OF THE ENVIRONMENT RESPONSE
TO THE
MISA ADVISORY COMMITTEE REPORT

Ontario

Office of the
Minister

Ministry
of the
Environment

135 St. Clair Avenue West
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416/323-4359

06M1201

June 27, 1989

Mr. J. MacLaren
Chairman
MISA Advisory Committee
Suite 502
112 St. Clair Avenue West
Toronto, Ontario
M4V 1N3

Dear Mr. MacLaren:

I would like to thank you and the members of the MISA Advisory Committee (MAC) for your review of the Development Document for the Draft Effluent Monitoring Regulation for the Electric Power Generation Sector.

I am attaching the Ministry's response to specific recommendations made by MAC on the draft Effluent Monitoring Regulation for the Electric Power Generation Sector.

I hope that these comments will assist members of the public in reviewing the regulation and providing comments to make it the best regulation possible.

Yours sincerely,

Jim Bradley

Jim Bradley
Minister

Enclosure

RESPONSE TO THE MISA ADVISORY COMMITTEE (MAC) REPORT (June 1, 1989) ON THE DRAFT EFFLUENT MONITORING REGULATION FOR THE ELECTRIC POWER GENERATION SECTOR

A synopsis of major recommendations from MAC and the corresponding MOE responses is provided. Further details are contained in the MAC report in Part "E".

REGULATION-SPECIFIC RECOMMENDATIONS

MAC's Recommendation:

3(i) "Premonitoring suggests that certain EPGS facilities with regard to water contamination are "less than BATEA". Ontario Hydro accepts this fact and has indicated a willingness to identify these situations at an early date and initiate design and Best Management Practice changes to improve operations. MAC welcomes Hydro's willingness to realize immediate improvements to inadequate situations."

MOE Response:

Although it must be recognized that BATEA is not defined at this phase, the MISA office welcomes Ontario Hydro's acceptance that certain EPGS facilities with regard to water contamination are "less than BATEA" and encourages them to realize immediate improvements to operations. Other sectors have also undertaken such activities in the area of upgrading existing facilities and improved best management practices (BMP) prior to the monitoring phase commencing. Also a number of companies have completed environmental audits in order to focus their efforts.

MAC's Recommendation:

3(ii) "Hydro has expressed concern about its ability to meet deadlines in view of possible protracted approval processes, especially involving nuclear installations. MAC is reluctant to slow progress towards BATEA because of such factors. It has been clear for over a year that such approvals would be needed, and the need to get on with the program."

MOE Response:

MOE shares MAC's concerns regarding Ontario Hydro's expressed problems in meeting program deadlines. All industrial sectors have been provided with a similar schedule following promulgation of their Effluent Monitoring Regulation. Ontario Hydro will be expected to meet the schedule.

MAC's Recommendation:

3(iii) "In general, the MISA Advisory Committee supports the proposed monitoring frequencies, but recognizes that there may be opportunity for some reduction in areas such as boiler blowdown."

MOE Response:

The regulation has been developed with consideration to reducing monitoring frequency/sample points where the database can be maintained. Rotational monitoring schedules for boiler blowdown is such an example. The Ministry does not support a further reduction in monitoring frequency or sampling points which would reduce the technical soundness of the database.

MAC's Recommendation:

"Accordingly, MAC recommends that the regulations be published, but during the public review period, the JTC be asked to re-examine the Regulation with a view to:

(i) further examine the extent of monitoring requirements to better focus the efficiency of analysis;

(ii) identify measures which will avoid regulatory delays;

(iii) identify obvious areas where premonitoring has shown that improvement is needed. If Ontario Hydro agrees to make such improvements, in the short term, reduced monitoring may be acceptable."

MOE Response:

(i) MOE is examining the monitoring requirements and may modify their extent provided these modifications have no impact on a technically sound database.

(ii) This item was discussed at the last Joint Technical Committee meeting on March 28, 1989. Ontario Hydro may make their request at the public comment phase.

(iii) As stated in (i) above, MOE is prepared to examine and modify the monitoring requirements, but these will not be based on any improvements that Ontario Hydro may undertake during the monitoring period.

MAC's Recommendation:

"MAC recommends that the Ministry undertake active negotiation with Atomic Energy of Canada Limited and the Federal Government to secure AECL's participation within the Monitoring Regulation."

MOE Response:

MOE agrees with this point. Activities are currently underway to secure AECL's participation in the regulation for non-radioactive contaminants. MOE has written to the Deputy Minister, Energy, Mines and Resources, Ottawa, indicating the Ministry's intent to list AECL facilities within the effluent monitoring regulation for the EPGS.

MAC's Recommendation:

"MAC recommends that current radionuclide monitoring be reported within the MISA framework and incorporated into the monitoring database."

MOE Response:

Radionuclide monitoring is the responsibility of the Federal Government and its agencies (AECB), as is clearly stated in the draft Regulations. To pursue inclusion of radionuclide monitoring in the regulation would require extensive negotiations due to the problem of regulatory jurisdiction. This would not be in the best interest of the MISA program since it is likely that unacceptable delays would result. Extensive monitoring of radionuclides is presently undertaken, and this information will be available through the AECB, Ontario Hydro and AECL.